january
june 1960

Vol. 164

ENGINEERING NEWS-RECORD

Serving The Entire Construction Industry

Index

. . . of editorial content

McGraw-Hill Publishing Co.
330 West 42nd Street, New York 36, N. Y.

INDEX

VOL

1
6
4

960

UMI

How to use this Index - see p. 18

ENGINEERING NEWS-RECORD INDEX

January-June 1960

A

ACCIDENTS see also: EXPLOSIVES; FIRE; FLOODS; SAFETY; WINDS
Concrete floor falls in Arlington, Va, apt bldg. p19 — Jan 7
Earth slide derails Great Northern RR near Seattle,*. p19 — Jan 7
Cave-in on Seattle bldg excavation kills three *. p22 — Jan 14
Water tank collapses in Manhattan demolition job. p22 — Jan 14
Barge cuts into Pontchartrain causeway,*. p32 — Feb 4
Cast-iron bearing breaks in suspended steel roof, Idlewild Airport. p32 — Feb 4
Steel girders collapse on Los Angeles factory erection job. p25 — Feb 11
Dike does not stop fiery lava; Hawaii ponders lava defense,*. p25 — Feb 11
Poor weld caused collapse of Los Angeles girders,* p30 — Feb 18
Hood Canal floating pontoons damaged for third time. p30 — Feb 18
Floating crane hits Arthur Kill bridge,*. p32 — Feb 25
Structural failures: too often, too similar. p21 — Mar 3
Agidir hotel, Morocco, was too easy prey for earthquake,*. p26 — Mar 10
Formwork collapses during Newark garage construction,*. p23 — Mar 17
Was Florida dam collapse an accident? CW p57 — Mar 24
Tunnel accidents take 30 lives in Toronto, in Japan and in Indianapolis. p26 — Mar 31
Minor blowups on Boston sewer job. CW p17 — Apr 7
Oros earth dam in Brazil washes out, map. p25 — Apr 7
Rome apartment bldg splits,*. p55 — Apr 21
Hyperbolic paraboloid roof collapses on Dallas service station,*. p27 — May 19
Jet blast rips asphalt runway,*. p26 — May 26
Earthquakes and waves do major damage in Chile,*. p22 — Jun 2
Chile earthquake: poor foundations add to failures,**. p22 — Jun 9
Tidal waves beat dikes in Hawaii,*. p23 — Jun 9
Agadir earthquake report. p22 — Jun 16
Floor collapses on Smithsonian Museum, Washington, D. C.,*. p42 — Jun 23

ACOUSTICS
Treatment by perforated elements in French highway tunnel,**, maps. p104 — Jun 23

ADHESIVES see: INSULATION, ADHESIVES

AERONAUTICS AND SPACE ADMINISTRATION see: AIRPORTS; DEFENSE; MISSILES

AIR CONDITIONING, HEATING, VENTILATION
Need to study thermal strains of structures. e p100 — Feb 4
Gas fired infra-red heaters for large areas. NP p49 — Mar 3
Bidders must guarantee boilers for NY state bldgs. p47 — Mar 10
Ceiling will heat, cool and absorb sound. NP p172 — Mar 24
NY sheet metal workers oppose use of flexible hose and spiral ducts in heating systems. p83 — Mar 31
Electric heating for three big housing projects, NYC, Phila and N.J. p24 — Jun 2

AIRCRAFT, AIR LIFT
Sonic boom questions. RC p6 — Jan 7
Water purification unit can be dropped by air. p56 — Jan 21
Sonic boom used to set off safe snowslides. CW p17 — Feb 11
Jet blast rips asphalt runway,*. p26 — May 26
and RC p9 — Jun 30

AIR FORCE see also: AIRPORTS; MISSILES
Fifteen civil engineers moved to new positions. p65 — Jan 21
Studies plan to disperse B-47 medium range bombers to civilian airports. WO p23 — Feb 18
Where the Air Force dollars will go. CW p17 — Feb 25
Maj. Gen. Augustus M. Minton, builder for the Air Force,*. p66 — May 26

AIR POLLUTION
A. J. Benline to head N.Y. air pollution control. p66 — Apr 7

AIRPORTS see also BUILDINGS, Hangars; MISSILES; PAVING
Annual review, major projects,**. p126 — Jan 28
Airport aid goes mostly for paving, table. p24 — Mar 10
Runway marker lights tilt if hit. NP p98 — May 19
Flush lights mark airport runways. NP p62 — May 26
New air brake will allow shorter runways. CW p15 — Jun 9

• American

D.C.
*Cantilever makes motel at Washington's national airport. p27 — Apr 28

Hawaii
Honolulu gets an air terminal,*. p24 — May 5

Illinois
*Chicago's O'Hare field. p128 — Jan 28

New York
*Flush lights in new runway, Idlewild. p149 — Jan 28
La Guardia soil stabilization unit prices. p65 — Feb 4
Heliport planned for Wall Street, NYC,*. p65 — Mar 24

Ohio
Tunnel will solve conflict between rail track and Akron Airport runway. CW p17 — Mar 10
Akron Airport: pilots have to look for train crossing runway. p26 — May 5

Virginia
Chantilly Airport terminal bids to be called. CW p17 — Jan 14
Bids open for $9m terminal bldg at Chantilly Airport,*. p24 — Feb 4
Everything is big at Dulles (Chantilly) International Airport,**. p42 — Feb 4

• Foreign
Sweden's Arland jet airport build in rocky terrain,**. p40 — Apr 7

ALUMINUM
Two designs for aluminum bridges, Long Island,**. p38 and e p100 — Jan 21
Model of aluminum moon house. CW p37 — Jan 28
Long Island bridges weigh only half as much. RC p12 — Feb 18
Argentina to get $6m aluminum plant. p66 — Feb 18
Interlocked aluminum for honeycomb solar screens in Arkansas bank,*. p28 — Mar 17
Reynolds memorial award goes to Swiss architect for Nestle's office,*. p24 — Apr 7
Grills in French highway tunnel portals for better lighting,**, maps. p104 — Jun 23

AMERICAN: Associations, Societies etc. — see subject

ANCHORS see: BOLTS

APARTMENTS see: BUILDINGS

ARCHES see: BRIDGES; CONCRETE; DESIGN; LUMBER; ROOFS; STEEL

ARCHITECTS see: ENGINEERING

ARCTIC CONSTRUCTION see: FROST

ASPHALT see also: PAVING
Completely portable plant with automatic features. CW p17 — Feb 11
Bituminous concrete producers to improve their product through research. p28 — Feb 11
Bituminous pavers go automatic. CW p17 — Feb 25
Neoprene-modified asphalt used to surface New Jersey Turnpike shoulders,*. p162 — Mar 24
Asbestos-asphalt surface mixes tested,*. p70 — Apr 21
Price fixing charges in Massachusetts. p136 — Apr 21
Dix-Seal method: new resurfacing mix proves out in New Hampshire,*. p50 — May 12
Asphalt plant has 2 ton capacity,*. NP p55 — Jun 2
Portable asphalt heater for plant mixture use. NP p51 — Jun 16
Railroads experiment with asphalt-treated roadbeds. p124 — Jun 23
Feeder bins now in small units.*. NP p140 — Jun 23

ASSOCIATED GENERAL CONTRACTORS see: CONTRACTORS

ASSOCIATIONS see subject, e.g.: ENGINEERING; HIGHWAYS; WATER

ATOMIC ENERGY, RADIATION see also: POWER
Long Beach, Calif, rules out radioactive waste. CW p17 — Jan 21
Franco-American company to build Dynatom in France. p189 — Jan 28
First atomic service park planned in N.J. CW p21 — Feb 18
AEC predicts economic nuclear electricity within 10 yrs. WO p23 — Feb 18
AEC report on future construction for competitive A power,*. p21 — Feb 25
New reactor designs spur search for low cost nuclear power,**, diags. p34 — Feb 25
Mix for Brookhaven synchrotron shielding. RC p11 — Mar 3
Con Ed A-power plant at Indian Point takes shape,**. p40 — Mar 17
Concrete shielding dome at Indian Point plant,*. p43 — Mar 17
Europe builds big atom smasher in Switzerland,*. p49 — Mar 17
Gnome project tunnel to start: underground blast testing. CW p57 — Mar 24
Peaceful A-blasts depend on outcome of Geneva talks. p32 — Apr 7
Nuclear excavation. e p116 — Apr 7
Nuclear Engineering and Science Conference deals with low cost plants. p29 — Apr 14
Opposition to thermonuclear seawater distillery at Point Loma, Calif. p30 — Apr 14
Fallout tags raindrops with radioactive tracer. p66 — Apr 21
Plans for biggest A-power plant in Calif. CW p17 — May 5
Nuclear gage measures soil moisture and density,* NP p72 — May 12
Objection to atomic waste dumping may halt projects in Cape Cod and N.Y. p28 — May 26
Who is responsible for what in building nuclear facilities. p44 — Jun 2
Reactor licensing snags on safety. WO p19 — Jun 16
AEC Nevada test site struck over use of technicians. p275 — Jun 23
Indian Point A-plant: steel erected,**. p22 — Jun 30

AUDITORIUMS see: BUILDINGS

AUGERS see: EQUIPMENT, Drills

AUTOMATION see: ELECTRONICS

AWARDS, SCHOLARSHIPS see also: EDUCATION
Westinghouse chairman receives John Fritz Gold Medal. p64 — Jan 14
Beavers honor six members,*. p65 — Jan 21
African dam wins British honor for French engineer. CW p37 — Jan 28
L.M. van der Rohe will receive AIA gold medal during Architects' convention. p58 — Mar 10
Reynolds aluminum award goes to Switzerland,*. p24 — Apr 7
N.P. Mason receives BRI's Fitzpatric Memorial Award,*. p97 — Apr 14
Con Edison's vicepresident, J.F. Fairman, named to receive NSPE award,*. p61 — Apr 28
Phillips Petroleum wins NSPE development award. p25 — May 5
ASCE gives outstanding achievement award to St. Lawrence project,*. p28 — May 26
H.K. Ferguson Co receive safety award,*. p81 — Jun 2
ASEE gives several awards at annual meeting,*. p20 — Jun 30

B

BEACH PROTECTION see: SOIL MECHANICS

BEAMS & COLUMNS, GIRDERS, TRUSSES
Truss moved by barge will make bridge to carry coke on belt conveyor,*. p27 — Jan 14
Prestressed girders carry roof, Utica's art gallery,**. p42 — Jan 21
No mystery in beam design. RC p8 — Feb 4
Bearing fails under girders at columns, Idlewild roof. p32 — Feb 4
Box girders for Cleveland bridge,**, diags. p34 — Feb 11
Novel prestressed beams go into Olympic road in Rome,*, diags. p40 — Mar 3
Where to place girts ? RC p14 — Mar 10
Repeated casting lowers prices of prestressed precast I beams, diags, table. p112 — Mar 24
High strength bar test. RC p8 — Apr 7
Old frame plus new columns: 12 floors added to NYC office bldg,**, diags. p48 — Apr 21
Hauling a long girder for Bronx hwy,**. p30 — May 19
Girders replace columns in Los Angeles bank job,** p46 — Jun 9

BIDS see project in question; see CONTRACTS & BIDS

BITUMINOUS CONCRETE see: ASPHALT; PAVING

BLASTING see: EXPLOSIVES

BOLTS AND RIVETS, ANCHORS
High strength bolting vs riveting tested,*. p53 — Jan 14
High strength bearing bolt eliminates one washer. NP p83 — Feb 18
Anchors hold down Florida tunnel sealed in steel,**, diags. p28 — Jun 9
Stud welded anchors fit angle fillets,*. NP p54 — Jun 16

BONDS see project in question; see also: CONSTRUCTION, Financing; STATE LEGISLATION

BOOK REVIEWS
Offices in the Sky, by E.Schultz and W.Simmons. p152 — Jan 28
Italian Villas and Palaces, by G.Mason. p152 — Jan 28
US Army in World War II — THE CORPS OF ENGINEERS: TROOPS AND EQUIPMENT, by B.D. Coll & al. p152 — Jan 28
Foundation Design and Practice, by J.H.Thornley. p105 — Feb 18
Industrial Thermal Insulation, by A.C.Wilson. p105 — Feb 18
Estimator's Piping Man-Hour Manual, by J.S.Page and J.G.Nation. p225 — Mar 24
Estimator's Electrical Man-Hour Manual, by J.S. Page and J.G.Nation. p225 — Mar 24

(Continued)

(Continued)

Highway Engineering, by L.J.Ritter and R.J. Paquette. p225 ... Mar 24
Route Surveys and Design, by T.F.Hickerson. p225 ... Mar 24
Data Book for Civil Engineers, by E.E.Seelye. p225 ... Mar 24
Principles of Engineering Economy, by E.E.Grant and W.G.Ireson. p73 ... Apr 7
New Forces in American Business, by D.M.Keezer. p73 ... Apr 7
Aerial Photographic Interpretation, by D.R.Lueder. p73 ... Apr 7
Plumbing, by H.E.Babbitt. p73 ... Apr 7
Shopping Towns USA, by V.Gruen and L.Smith. p76 ... Apr 7
Second Treasury of Contemporary Homes, by the editors of Architectural Record. p76 ... Apr 7
Architectural Rendering, by A.O.Halse. p109 ... Apr 14
Examples of the Design of Reinforced Concrete Bldgs, by C.E.Reynolds. p109 ... Apr 14
Theory of Plates and Shells, by S.Timoshenko and S.Woinowsky-Krieger. p89 ... Apr 21
Office Building and Office Layout Planning, by K.H.Ripnen. p89 ... Apr 21
The Dymaxion World of Buckminster Fuller, by R.W.Marks. p121 ... May 19
Hwy Engineering Handbook, ed by K.B.Woods. p121 ... May 19
Mechanical Estimator's Guide, J.Gladstone, editor. p121 ... May 19
Mover of Men and Mountains, by R.G.LeTourneau. p169 ... Jun 23
Plumbing, Heating and Piping Estimators' Guide, by P.G.Davis. p169 ... Jun 23
Design of Modern Steel Structures, by L.E.Grinter. p169 ... Jun 23
Structural Mechanics, by S.T.Carpenter. p169 ... Jun 23

BRIDGES

New bridge built around old in Idaho while trains keep running,**. p20 ... Jan 7
Pier in wrong place is moved,*. p25 ... Jan 14
Did bridge contest help steel? RC p12 ... Jan 21
Two designs for aluminum bridges,**. p38 and e p100 ... Jan 21
First U.S. bridge built with composite steel and prestressed concrete trusses,*. p42 ... Jan 28
Annual review, major projects,**. p126 ... Jan 28
Bridges crossing Interstate must have 16 ft clearance. p23 ... Feb 4
A-shaped tower supports asymmetric suspension bridge across the Rhine,**. diags. p34 ... Feb 4
Upgrading county bridges: ASCE's campaign in Tennessee. e p100 ... Feb 4
Room for improvement in designing for thermal strains. e p100 ... Feb 4
Novel bearings and connections for cantilever truss, Cleveland,**. diags. p34 ... Feb 11
Bridge clearance confusion discussed,*. p28 ... Feb 18
Hwys and bridges still bargain as volume rises, table. p29 ... Feb 18
Double deck lift span is a challenge to builders,**. p38 ... Feb 18
How to use high strength steel effectively,*, diags, table. p52 ... Feb 18
Full scale tests begin on steel bridge at Northwestm University,*. p75 ... Feb 18
Don't raise bridges on interstate. RC p12 ... Feb 25
Road probers hear cost of bridge clearances. p22 ... Feb 25
Interstate bridge clearance confusion. e p92 ... Mar 3
Bridge contest help. RC p6 ... Mar 10
World's longest concrete arch in Australia,*. p49 ... Mar 17
Old swing railroad bridge gets a new lift,**. p66 ... Mar 24
Lake Oneida bridge sets a span record, has suspended girders,**, diags. p38 ... Mar 31
Make design competitive. RC p8 ... Apr 21
Unique tube arch bridge spans Swedish fjord,**. p34 ... May 5
and e p132 ... May 12
Portugal will build Europe's longest suspension bridge,*. p24 ... Jun 9
Electronic credit card for interstate bridge toll,*. p38 ... Jun 30

• American

California
D.B. Steinman will study Golden Gate capacity to take rapid transit vehicles. p26 ... Jan 21
*Multiple bridge over Los Angeles River. p144 ... Jan 28
Welded steel plate girder of high strength to span Whiskey Creek,*. diags, table. p52 ... Feb 18
F.W. Panhorst retires, chief bridge engineer for 29 years. p207 ... Mar 24
Rapid transit on Golden Gate is feasible. CW p37 ... Jun 23

Connecticut
Composite beam bridge on Hollenbeck River bid two ways. p92 ... Jun 23

Florida
* Julia Tuttle causeway, Miami. p136 ... Jan 28
Construction booms in Florida,**, graphs. p40 ... May 5

Idaho
Bridge over Snake River built while trains keep running,**. p20 ... Jan 7

Louisiana
Barge cuts into Lake Pontchartrain Causeway, deck sections plunge,*. p32 ... Feb 4
Bidding is lively on bridge jobs near Tullos; unit prices. p57 ... Jun 16

Maine
New shingles for bridge over Carrabasset River,*. p30 ... Apr 14

Maryland
Baltimore deck girder bridge unit prices. p134 ... Mar 24
Concrete looses to steel on Capitol Beltway bridge over Potomac. p21 ... Jun 30

Michigan
Double deck lift span on rail-hwy Portage Canal Bridge,**. p38 ... Feb 18
Bridge near Jackson raised to meet missile clearance. CW p17 ... Apr 7
Bids to open on link with Ontario at Sault Ste Marie. p32 ... May 26

Mississippi
Biloxi Bay Bridge will use Japanese steel. CW p17 ... May 12

New Hampshire
Welded steel girder bridge unit prices. p66 ... Jun 2

New Jersey
Camden-Phila railroad bridge gets a new lift,*. p66 ... Mar 24

New York
Work starts on Throgs Neck Bridge cables. CW p17 ... Jan 14
Narrows Bridge tower piers contract awarded. p29 ... Jan 14
Second deck begun on Geo Washington Bridge. CW p17 ... Jan 21
Two aluminum bridges on Long Island,**. p38 ... Jan 21
George Washington's lower deck section raised and rolled into place,**. p44 ... Jan 28
* American Rapids Bridge, Niagara is the longest plate girder. p130 ... Jan 28
* Twin steel arches over Mohawk River. p141 ... Jan 28
* Second deck for Geo Washington, NYC. p143 ... Jan 28
Long Island aluminum bridges weigh only half as much. RC p12 ... Feb 18
US Steel will install cables for Narrows Bridge. p24 ... Mar 10
Cable spinning starts at Throgs Neck,*. p64 ... Mar 24
Lake Oneida Bridge has longest prestressed span, suspended girders,**. diags. p38 ... Mar 31
Newburgh-Beacon span planned over the Hudson. CW p21 ... Apr 14
Steel from old bridge becomes part of new deck in Franklin County,*. diag. p53 ... Apr 28
Newburgh Bridge: two lanes are too little. e p116 ... Apr 28
Verrazzano-Narrows Bridge will be the official name. e p116 ... May 26
Newburgh crossing will have more than 2 lanes eventually. RC p6 ... Jun 2
Throgs Neck Bridge: two cables – 14,000 miles of wire placed,**. p27 ... Jun 2
Narrows Bridge piers unit prices. p103 ... Jun 23
Niagara power plant doubles as bridge,**. p26 ... Jun 30

Ohio
Hwy overpass pier in Arkon is moved,*. p25 ... Jan 14
Bridge in Cleveland will carry coke on a belt conveyor,*. p27 ... Jan 14
Cantilever deck truss spans Cuyahoga in Cleveland,** diags. p34 ... Feb 11

Pennsylvania
Phila-Camden railroad bridge gets a new lift,*. p66 ... Mar 24
State's bridge replacement costs set at $250m. p181 ... May 19

Tennessee
Johnson county bridge award won on roadway items; unit prices. p79 ... Jan 14

Texas
Concrete vs steel for Dallas overpass; unit prices. p85 ... May 12

Virginia
Concrete looses to steel on bridge over Potomac. p21 ... Jun 30

Washington
Composite steel and prestressed concrete trusses make logging road bridge,*. p42 ... Jan 28
Hood Canal floating bridge pontoons damaged for third time. p30 ... Feb 18
Consultants changed on accident-prone Hood Canal bridge. CW p17 ... Mar 17
Hood Canal bridge is under construction again. p26 ... May 12
Second floating bridge for Lake Washington is approved. p26 ... May 12
Test load on large piles checks driving formula, Seattle freeway viaduct,**. p50 ... Jun 9
Vancouver-Portland bridge uses electronic toll credit card,**. p38 ... Jun 30

• Foreign

Australia
World's longest concrete arch in Sydney harbor,*. p49 ... Mar 17

Belgium
Mariakerke Bridge: novel prestressed concrete,*, diags. p40 ... Apr 21

Canada
Bids to open on link with Michigan at Sault Ste Marie. p32 ... May 26
Second Narrows Bridge, Vancouver, ready for traffic,*. p24 ... Jun 30

China
First steel bridge spangs Yangtze at Wuchang,*. p48 ... Jan 21

Cuba
Three hinged arch spans northern coast ravine,**. p43 ... Jun 30

France
Bridge across the English Channel proposed. CW p17 ... Apr 7
Three tunnels and a bridge backed for English Channel. p30 ... Apr 14

Germany
A-shaped tower supports Severin Bridge across the Rhine at Cologne,**, diags. p34 ... Feb 4

Great Britain
New life for 85 yr old railroad bridge across the Avon River,**. p34 ... Mar 17
Bridge across English Channel proposed. CW p17 ... Apr 7
Three tunnels and a bridge backed for English Channel. p30 ... Apr 14

Iran
Bridge to Abadan Island to be dedicated,*. p68 ... Feb 18

Italy
Novel prestressed beams make Olympic viaduct in Rome,*, diags. p40 ... Mar 3

Pakistan
Rail and hwy bridge started over Rohri Channel of the Indus River at Sukkur. p54 ... Mar 10

Panama
Foreign steel cinches Canal Bridge contract. p22 ... Mar 10
German steel for bridge; unit prices. p140 ... Mar 24
Cofferdam troubles delay foundation work on Canal Bridge. CW p17 ... Jun 2

Portugal
Unusual suspension bridge will span Tagus at Lisbon. p146 ... Mar 24
Tagus crossing will be Europe's longest suspension span,*. p24 ... Jun 9

Sweden
Tube arch bridge spans Askero Fjord,**. p34 ... May 5

BUDGET see: CONGRESS; CONSTRUCTION, Financing; DEFENSE; PUBLIC WORKS

BUILDING CODES AND LAWS see also: FIRE PROTECTION; STANDARDS & SPECIFICATIONS

Philadelphia code promotes modern methods. p26 ... Mar 10
Setback for model code; NYState case. e p116 ... Mar 17
Earthquake specialists go to Morocco. CW p57 ... Mar 24
New fire code proposed. p67 ... Mar 24
New York State bldg code still alive – but barely. p26 ... Apr 7
More rigorous uniform bldg standards asked by Bldg Research Institute conference. p28 ... Apr 14
Plan to promote interest in bldg code reform. p23 ... Apr 21
Public education needed to produce good codes. RC p8 ... May 5
BOCA revises Basic Building Code. p25 ... Jun 9
Work for better codes. e p96 ... Jun 16

BUILDINGS see also: CITIES; HOUSING; ROOFS; WALLS

Building over coal mine yields as ground settles,*. p39 ... Jan 7
Model of aluminum moon house. CW p37 ... Jan 28
Annual review: Rising costs increase demand on designer and builder,**. p64 ... Jan 28
AIA to honor five bldgs,**. p24 ... Feb 25
Building costs in Detroit, table. p109 ... Mar 24
Where the building dollar goes. p121 ... Mar 24
How do buildings perform. e p156 ... Apr 21
Texas record in skyscrapers: tallest all welded steel framed bank in Houston. p24 ... Apr 28
* Tires make mattress on roof of bldg. p27 ... Apr 28
Florida construction booms,**. p40 ... May 5
Notable foundations that set precedents,*, diags. p43 ... May 19
Sidewalk superintending: TV and telephones on Manhattan office construction,*. p23 ... Jun 16
Costs per cu ft by type of bldg. p82 ... Jun 23
Where the building dollar goes. p83 ... Jun 23

• Apartments, Hotels, Restaurants
Huge apt bldg to go up on Ebbets Field site, Brooklyn. CW p13 ... Jan 7
Khruschev's gift to Burma: Rangoon hotel need $1m changes before it can pay off. CW p17 ... Mar 10
Marina City – Chicago's tower apartments,*. p23 ... Mar 10
Tenants stay in Rome's split bldg,*. p55 ... Apr 21
Research brings new materials and savings to NY State housing projects. p70 ... Apr 21
* FHA approves loan for Louisville, Ky, 29 story apartment bldg. p27 ... Apr 28
* Cantilever makes motel in Washington's airport parking lot. p27 ... Apr 28
Special chutes for mat casting, Taft Houses apartments, NYC. p54 ... Apr 28
More and better apartments in France,**. p54 ... May 26
Big housing projects in NYC, Phila and N.J. to be all electric. p24 ... Jun 2
Dworman Associates, owner-builders of NYC's 12 story apartment project, erect political fence,*. p32 ... Jun 16
Three NYC hotels race for first, Zeckendorf, Americana and River View,**. p56 ... Jun 30

• Churches
Metal roof forms walls for church adjoining shopping center, North Hills, Pa,*. p37 ... Feb 18
Squaw Valley's chapel remains as an Olympic keepsake,*. p32 ... Mar 3
* Looping arches for modern church in Dominican Republic. p26 ... Apr 28
Crane sets plywood panels for pleated roof, St. Louis Congregational Church,*. p26 ... May 12

• Culture, Entertainment, Meetings, Sports
Prestressed girders carry roof and hung balcony, Utica art gallery,**. p42 ... Jan 21
Two portable bldgs will represent US at fairs in Morocco and Turkey,*. p48 ... Jan 21
* Candlestick Park stadium, San Francisco. p74 ... Jan 28
* Guggenheim Museum, NYC. p88 ... Jan 28
St. Louis, Mo, pool-bathhouse unit prices. p65 ... Feb 11
World's Fair engineering. e p100 ... Feb 11
Precast prestressed stadium floats on hyperbolic paraboloid supports in Sumner, Wash,**. p62 ... Feb 18
Work starts on Marine County Civic Center, designed by Wright,*. p25 ... Feb 25
Phillies will stay in Philadelphia, no N.J. stadium. CW p17 ... Mar 3
Complex concrete shapes; 15 stadiums built for Rome Olympics,**. p42 ... Mar 3
Chicago's Marina City,*. p23 ... Mar 10
Fleetwood Square project in Dallas,*. p65 ... Mar 24
Sports palace in London will include own hotel. p148 ... Mar 24
Soviet-financed stadium started in Jakarta, Indonesia. p148 ... Mar 24

Chicago exhibit hall topped out,*. p28 ..... Apr 7
New York City's World Fair may run for two years. CW p17 ..... Apr 21
Unusual cable roof for Utica municipal auditorium,** p36 ..... Apr 28
NYC's ball park seats on tracks will roll to side of gridiron,*. p25 ..... May 5
Detroit's Cobo Hall is a 9 acre showroom,*. p28 ..... May 12
Portland, Ore, Memorial Coliseum: double structure is bowl-in-Box,**, diag. p38 ..... May 12
NY State Raceway: contractors accused of defrauding NY State of $11m. p80 ..... Jun 2
Temporary construction in Los Angeles Sports Arena for Democratic Convention. CW p17 ..... Jun 16
Ohio park and swimming pool unit prices. p57 ..... Jun 16
Floor collapses in Smithsonian Museum, Washington D.C.,*. p42 ..... Jun 23
Penn State stadium moved to larger site,*. p46 ..... Jun 23
Award coming for Washington, D.C., concrete stadium,*. p21 ..... Jun 30

• Federal, Municipal, State
First mechanized post office in Providence, R.I., has barrel-shell roof,**. p30 ..... Jan 14
Nylon balloon speeds Providence post office construction,*. p34 ..... Feb 18
British Parliament towers are slanted. CW p17 ..... Mar 3
NATO opens new HQ in Paris,*. p53 ..... Mar 10
Unusual scaffold for Capitol repair job,*. p53 ..... Mar 17
Federal court house and office bldg, Brooklyn: record for composite design,*, diag. p84 ..... Mar 24
64 new federal bldgs authorized. p98 ..... Apr 28
Atlanta incinerator pays its own way,* p112 ..... May 12
Delay in conveyor installation at Providence post office. CW p17 ..... Jun 16
Philadelphia's Police Administration will be a concrete monumental building,*. p23 ..... Jun 16
Federal bldg plans come alive,**. p17 ..... Jun 30

• Garages
Formwork collapse delays Newark, N.J. underground parking garage job,*. p23 ..... Mar 17
Chicago considers garages connected to rapid transit terminals. p28 ..... Mar 17
Beauty and economy for Henry Ford Hospital garage, Detroit,**. p46 ..... Mar 31
Rolling forms speed construction of automated garage in Brooklyn,**. p36 ..... Apr 7
Building elevator tower first for Seattle parking garage,*. p63 ..... Apr 21

• Hangers see also: AIRPORTS
* Mammoth structure at New York's International Airport. p66 ..... Jan 28
Architects for Northeast Airlines hangar. RC p12 ..... Feb 11
Concrete cantilever shells for Frankfurt's hangar,*. p50 ..... Jun 2

• Homes see also: HOUSING
More Finnish prefabs expected in U.S. CW p21 ..... Apr 14

• Hospitals, Medical Centers
Precast bearing walls for New Haven medical center, Conn.*. p35 ..... Apr 7
Mexico City's medical center nears completion,*. p80 ..... May 19

• Industrial plants and sites see also: EQUIPMENT
Industrial bldg loans upset. p108 ..... Jan 14
More liberal depreciation allowances expected. WO p19 ..... Jan 21
Soviet textile plant gets US equipment. p53 ..... Jan 21
* Yuma, Ariz, power plant. p71 ..... Jan 28
Steel girders collapse on Los Angeles factory job. p25 ..... Feb 11
Law suit in Formosa fertilizer plant. p87 ..... Feb 11
Argentina to get $6m aluminum plant. p66 ..... Feb 18
Industrial equipment costs, indexes; graphs & tables. p98 ..... Mar 24
Plant construction plans zoom, graphs, tables by industry. p25 ..... Apr 14
Business plans record outlays, table. p96 ..... Apr 28
Upjohn Co plant near Kalamazoo: space truss roof,**. p54 ..... May 19
Plastic design cuts steel frame cost in Nashville tire plant,*, diag. p50 ..... May 26
Dundee cement plant built in Mich by Swiss company. p91 ..... Jun 9
Capital spending plans, tables. p79 ..... Jun 16

• Laboratories, Research Centers
Cambridge, Mass, new research center to be 15 story high. p32 ..... Feb 4
American firm to design radiation lab for India. p49 ..... Mar 17
Designers, contractors, testing labs. e p116 ..... Apr 28
Testing and inspecting services and labs. RC p10 ..... Jun 9
Pile caps tested at Bell Telephone lab in N.J. CW p13 ..... Jun 30

• Offices
Cantilevered framing gives additional floor space to San Fran office,*. p22 ..... Jan 7
Manhattan office bldg boom continues. p62 ..... Jan 7
Crown-Zellerbach, San Francisco: glass enclosed bldg with column-free space,*. p28 ..... Jan 21
* 60-story Chase Manhattan Bank, NYC. p64 ..... Jan 28
* Grand Central City, NYC. p72 ..... Jan 28
* First National City Bank, Houston. p72 ..... Jan 28
* Norton Building, Seattle. p74 ..... Jan 28
* Kaiser Industries new HQ in Oakland. p86 ..... Jan 28
NYC's 18 story bldg: bank stays open, columns pass through,*. p22 ..... Feb 4
NATO opens new HQ in Paris,*. p53 ..... Mar 10
Interlocked aluminum for honeycomb solar screens in Arkansas bank,*. p28 ..... Mar 17
Boston's legal difficulties in office construction. CW p15 ..... Mar 31
Nestle's bldg in Switzerland wins Reynolds Aluminum award,*. p24 ..... Apr 7
Dramatic thin shell roof for Mich bank,*. p34 ..... Apr 7
Construction begins on Chicago's 40-story marble-faced skyscraper,*. p32 ..... Apr 21
Morgan Guaranty Trust: 12 floors and penthouse added to old bldg,**, diags. p48 ..... Apr 21
Houston bank is tallest all welded steel framed bldg. p24 ..... Apr 28
Largest skyscraper in New Orleans begun. p28 ..... May 5
Upjohn Co's bldg near Kalamazoo: mass produced 4 acre space truss roof,**. p54 ..... May 19
Vickers bldg in London will top St. Paul's. p80 ..... May 19
Peeling plastic off panels, Union Carbide bldg, NYC,*. p24 ..... Jun 2
Girders replace columns in Los Angeles Security First National Bank bldg,**. p46 ..... Jun 9
Western Electric Co. uses TV on telephones to inform passers-by on office construction,*. p23 ..... Jun 16
High strength steel frame for Portland, Ore, office bldg,*, diag. p24 ..... Jun 16
Drilled in caissons become legs for Western Electric skyscraper, NYC,**, diag. p34 ..... Jun 16
Pre-fab field offices are colonial style,*. NP p139 ..... Jun 23
Engineering H.Q. cornerstone placed. CW p37 ..... Jun 23

• Prefabs
Geodesic school can be built in two weeks. p160 ..... Mar 24
More Finnish homes to be imported into the U.S. CW p21 ..... Apr 14
Mexico builds prefab schools with plumbing wall,*. p53 ..... Jun 9
Field offices are in colonial style,*. NP p139 ..... Jun 23

• Schools
US aid unlikely, classroom shortage to increase. p23 ..... Jan 7
English school built over coal mine yields as ground settles,*. p39 ..... Jan 7
Nashville school board seeks halt to bid shopping. p62 ..... Jan 7
Politics traps school aid bill. p23 ..... Feb 11
Classroom shortage is not so acute. CW p21 ..... Feb 18
School aid bills shape up. WO p19 ..... Feb 25
School construction bonds of $300m requested. p93 ..... Mar 17
Science labs classed as frills? CW p57 ..... Mar 24
School bldgs for $10 a sq foot,**. p100 ..... Mar 24
School costs, unit prices, NYC and NYState, graphs, tables. p102 ..... Mar 24
Prefab geodesic school can be built in two weeks. p160 ..... Mar 24
College aid slowed by fight over how and how much. p21 ..... Mar 31
607,600 school rooms needed within 10 yrs. WO p23 ..... Apr 14
Univ of Wisconsin science bldg unit prices. p71 ..... May 5
Will school bill become law? p23 ..... Jun 2
Mexico builds prefab schools,*. p53 ..... Jun 9
Optimism for federal aid to schools bill. WO p39 ..... Jun 23

• Shelters see also: DEFENSE
Rockefeller plans shelter for every bldg in N.Y. CW p17 ..... Feb 25
Fallout shelter gamble. e p100 ..... Mar 31
Effectiveness of fallout shelters varies with the cost. p32 ..... Jun 2

• Shops
Supermarket of the future: spiral ramp, electronic service,*. p19 ..... Jan 7
Woman against spiral ramped shopping. RC p12 ..... Feb 11
Precast pile columns put Honolulu shopping center a story above grade,**. p40 ..... Feb 25

• Storage, Warehouses, Tanks, Silos see also: RESERVOIRS
Sugar pulp warehouse in Tracy, Calif,*. p49 ..... Jun 2
Lumber Co. builds tall timber warehouse at low price,**. p30 ..... Jun 30

• Terminals, Stations, Repair Shops
Building steel dome on nylon balloon, Ill. repair shop,**. p28 ..... Jan 7
PNYA bus terminal expansion starts. CW p17 ..... Feb 4
Dulles Airport terminal and mobile lounges,*. p24 ..... Feb 4
Nervi designs Washington Bridge bus station, NYC,*. p70 ..... Mar 24
Air terminal for Honolulu,*. p24 ..... May 5

• Towers see also: RADIO, TELEVISION
British Parliament towers are slanted. CW p17 ..... Mar 3
Cape Girardeau TV tower, Mo, will rise 1676 ft. CW p17 ..... Apr 21
Towers in Cadiz, Spain, support a mile long cable,*. p76 ..... May 19

BUREAU OF PUBLIC ROADS see: HIGHWAYS

BUREAU OF RECLAMATION see: RECLAMATION

C

CABLES
Prestressing stabilizes cable roof, Utica auditorium,**. p36 ..... Apr 28
Passenger cableway across Zurich Lake has longest cable span,*. p75 ..... May 19
Power cable in Spain spans a mile,*. p76 ..... May 19
Cable spinning on Throgs Neck Bridge,**. p27 ..... Jun 2

CAISSONS, COFFERDAMS see also: BRIDGES; DAMS; PILES; PORTS
Notable foundations that set precedents,*, diags. p43 ..... May 19
Large drilled-in caissons become sturdy legs for NYC skyscraper,**, diag. p34 ..... Jun 16

CANALS, CHANNELS see also: RIVERS
Grand Alsace Canal on the Rhine,*. p57 ..... Feb 25
Peg and plastics model for Panama Canal excavations,*. p22 ..... Mar 10
Another canal proposed for Lake Ontario-Lake Erie. p64 ..... Mar 24
Panama Canal should be deepened. CW p15 ..... Mar 31
Inland waterway to start on Florida's Gulf Coast. p138 ..... Apr 21
Report on Panama's future, map. p41 ..... Jun 23
California is pre-settling canal right of way by flooding,*. p37 ..... Jun 30

CAPITAL SPENDING, see: BUILDINGS, Industrial plants; EQUIPMENT

CAUSEWAYS see: BRIDGES

CITIES see also: BUILDINGS; HOUSING; ZONING
Urban Research Council to be formed. CW p17 ..... Jan 21
Highway research and the city,*. p23 ..... Jan 21
A spur for slum clearance. WO p19 ..... Feb 11
Tomorrow's city: British and American version,*. p26 ..... Feb 11
Urban research lags. e p100 ..... Feb 11
Construction camp for Hoover Dam workers becomes a city. CW p21 ..... Feb 18
Less red tape in Urban Renewal Administration. p24 ..... Mar 17
Special tax rates are a tricky redevelopment tool. p317 ..... Mar 24
Blast proof town planned underground by Cornell U. architects,*. p28 ..... Apr 21
Florida is a booming construction market,**, cities develop. p40 ..... May 5
Urbanization of America: small bites for big problems. e p100 ..... May 5

Birmingham, Ala
Commercial developments add to construction boom. p28 ..... May 5

Boston, Mass
* Prudential Center. p77 ..... Jan 28
Tax relief on Prudential Center may be challenged,*. p316 ..... Mar 24
State court does not authorize office bldgs. CW p15 ..... Mar 31
Prudential Center and turnpike extension tied in bill before state legislature,*. p111 ..... May 12
Prudential Center project jolted, but survives. p91 ..... Jun 9
Prudential job awaits new court test. p270 ..... Jun 23

Brasilia
Half-finished city becomes a capital,**. p24 ..... Apr 21

Chicago, Illinois
Marina City; apartment towers, recreational facilities, garages, boat-harbor,*. p23 ..... Mar 10
Prosperity via zoning. e p116 ..... Apr 7

Cincinnati, Ohio
Arthur D. Bird becomes city engineer. p45 ..... Jan 7
Suburb preparing land development regulations. p151 ..... Feb 18

Dallas, Texas
Building center: Fleetwood Square to have three major units,*. p65 ..... Mar 24
Paving contract: romance in street names. CW p21 ..... May 19

Detroit, Mich
Building costs table. p109 ..... Mar 24
Cobo Hall — 9 acre showroom,*. p28 ..... May 12

Hartford, Conn
F. H. McGraw out as redeveloper. p86 ..... Feb 11

Horizon City, Cal
To-morrow's city planned outside El Paso,*. p26 ..... Feb 11

Houston, Texas
* Cullen Center aerial view. p74 ..... Jan 28

Levittown, N.J.
State court rules against discrimination. p150 ..... Feb 18
Racial bars lifted. p24 ..... Apr 7

London, England
Tallest building will top St. Paul's. p90 ..... May 19
Piccadilly Circus will not look like Times Square. CW p17 ..... May 26

Los Angeles, Cal
* Century City — plans for an urban center. p80 ..... Jan 28
Mass transit system feasible. p24 ..... Feb 11
Rapid transit system recommended. CW p21 ..... Apr 14
Maneuvers to avoid water shortage. p26 ..... Jun 16
Rapid transit recommended. CW p13 ..... Jun 30

New York, N.Y.
Zoning proposals called a monstrosity. CW p13 ..... Jan 7
Manhattan office bldg boom continues. p62 ..... Jan 7
Zoning: a city's future. e p122 ..... Jan 14
World Trade Center proposed for lower Manhattan,*. p28 ..... Feb 4
More rebuilding plans: 25 acres on the Hudson River. CW p17 ..... Feb 11
Housing projects on old sport sites. CW p17 ..... Feb 25
Plan to enclose and chlorinate East River beaches. CW p17 ..... Mar 17
Blanket tax exemption for new housing expected. p25 ..... Mar 17
Heliport planned for Wall Street,*. p65 ..... Mar 24
Geo Washington Bridge Bus Station will change area,*. p70 ..... Mar 24
World's Fair sparks big road plans, map. p23 ..... Apr 28
Sidewalk arcades inside bldgs would ease garment center traffic congestion. CW p17 ..... May 12
Industrial waste control may become stiffer. p25 ..... May 12
City has more than $7.7 billion worth of construction. CW p21 ..... May 19
Curb your crane: construction equipment mustn't block traffic. CW p17 ..... May 26

(Continued)

(Continued)

Increased fine for traffic-blocking encumbrances. CW p17 ... Jun 2
The rise and fall of a construction shack that grew too grand,*. p23 ... Jun 2

Philadelphia, Pa
Passenger Service Improvement Corp runs commuter rail lines. p48 ... Jan 28
Fire and health safety campaign. CW p21 ... Feb 18
Bldg code promotes modern methods. p26 ... Mar 10
Engineers exempted from city union. p83 ... Mar 31
Aluminum producer and homebuilder team up for Eastwick renewal project. p21 ... Jun 9

Pittsburgh, Pa
East Hills housing will test new concepts. p28 ... Feb 4

Providence, R.I.
$102m redevelopment proposal; civic center on 50 acres. CW p17 ... May 12
$28m civic center and other big plans for 1970. p32 ... May 26

San Francisco, California
Nine firms spend $100,000 to prepare bids for 20-acre redevelopment. p65 ... Mar 24
Eight developers present programs for Golden Gate Redevelopment. p25 ... May 5
Bay area transit plan will not be ready for vote this year. p25 ... Jun 16

Seattle, Wash
Difficulties in financing monorail. CW p57 ... Mar 24

Washington, D.C.
Construction stalled: dispersal for defense issue. WO p19 ... Feb 11
Rapid transit for D.C. gets support. WO p19 ... May 12

COLUMNS see: BEAMS & COLUMNS; CONCRETE; STEEL

COMPUTERS see: ELECTRONICS

CONCRETE see also: PAVING
Russians develop metal-like concrete. CW p17 ... Jan 14
Hydraulic coring machine for production type tests. NP p60 ... Jan 21
Portable concrete drilling unit,*. NP p84 ... Feb 18
Concrete equipment has more automation. p28 ... Feb 25
Lack of field data on concrete. RC p8 ... Mar 3
Complex concrete shapes for Rome's Olympic stadiums,**. p42 ... Mar 3
High strength reinforcing with steel is the next step forward in concrete construction. e p92 ... Mar 3
ACI meeting: more research needed; web reinforcement formula needs improving. p61 ... Mar 24
ACI elects J. W. Kelly,*. p58 ... Mar 31
High strength bar test. RC p8 ... Apr 7
Big future for cold twisted bars. RC p10 ... Apr 14
Tough specs for NYC's bus terminal designed by Nervi. CW p17 ... May 5
German invented concreting machine for rapid casting,**. p34 ... May 26
CIB advice on inspection. RC p25 ... Jun 23

• Additives
Curing compound also hardens, seals, dustproofs. NP p61 ... Jan 14

• Cement
Dundee Cement Co, Swiss firm, opens plant in Michigan. p91 ... Jun 9

• Forms
Form tie snaps on with no nailing,*. NP p59 ... Jan 21
Cam-Lock forming system saves bracing. NP p53 ... Feb 4
Inflatable forms for continuous pipe cast in place,*. NP p33 ... Feb 18
Telescopic screw jacks designed for falsework. NP p55 ... Mar 17
Ingenious formwork, rolling scaffolds for Brooklyn's automated garage job,**. p36 ... Apr 7
Careless formwork; reshoring vital to safety. e p116 ... Apr 7
Insulated forms for winter concreting on Ohio River lock. p55 ... May 12
Flexible steel forms are pre-set for curvature. NP p72 ... May 12

• Lift Slab
Russians use the method. CW p17 ... Jan 21

• Mixing & Placing, Tensioning, Reinforcing
"Nutcracker" for tensioning tie beams for Providence post office,**. p30 ... Jan 14
Batcher control checks aggregate moisture. NP p60 ... Jan 21
Pouring concrete onto metal lath. RC p8 ... Feb 4
Concreting at Bratsk hydro goes on at 50 below,*. p25 ... Mar 10
Automation in batching. e p84 ... Mar 10
Concrete mixers,**. 4 NPs pp 172 & 173 ... Mar 24
Huge buckets with radio control for Glen Canyon Dam job,*. p22 ... Apr 21
Special chutes for mat casting, Taft House, Manhattan. p54 ... Apr 28
Stronger reinforced concrete pavements,**. p44 ... May 12
Machine for vibrating wire fabric into paving,*. p46 ... May 12
New model in Scoot-Crete concrete placing trucks,*. NP p90 ... May 19
Punch card automation for concrete plants. NP p106 ... Jun 16

• Precast, Prestressed
Precast prestressed stadium floats on hyperbolic paraboloid supports,**. p62 ... Feb 18
Norwegian symposium on grouting prestressed concrete. p68 ... Feb 18
Precast pile columns for Honolulu shopping center,** p40 ... Feb 25
Prestressed rail crossties installed near Tampa, Fla. CW p17 ... Mar 3
Novel prestressed beams make Olympic road in Rome,*, diags. p40 ... Mar 3
Reinforced prestressed railroad crossties. p26 ... Mar 10
Precast dome for A-power plant shielding,*, diag. p43 ... Mar 17
Prestressing inspection. RCs p37 ... Mar 24
Repeated casting lowers prices of I beams, diags, table. p112 ... Mar 24
Precast hyperbolic paraboloid panels for Detroit garage wall,**. p46 ... Mar 31
Novel prestressed suspended span for canal in Belgium,*, diags. p40 ... Apr 21
Prestressed railroad ties tested in California,*, diags. p87 ... May 19
German invented machine: rapid casting promises wider use of prestressed concrete,**. p34 ... May 26

CONGRESS see also: DEFENSE; PUBLIC WORKS
Budget surplus not for bldg. p24 ... Jan 14
Budget fight coming. WO p19 ... Jan 21
Construction takes heavy cut in budget, table. p21 ... Jan 21
Lump-sum requests on water jobs planned. WO p19 ... Feb 4
Here comes the vetoes. WO p19 ... Feb 11
Lump sum appropriations discussed for water projects. p24 ... Feb 11
Where key bills stand in Congress. p32 ... Apr 14
Space bldg funds cut. p26 ... Apr 21
Congress serves up veto fodder. WO p19 ... May 12
Hwy money as usual; military construction cut. p34 ... May 19
Republicans offer new depressed areas bill. p26 ... May 26
Campaign fever looses purse strings. WO p19 ... Jun 2
Legislative log-jam builds. WO p19 ... Jun 16

CONSTRUCTION see also: CONTRACTS; DEFENSE; ENGINEERING; PUBLIC WORKS
Consultants for construction. RCs p6 ... Jan 7
Nothing new in construction since the Pyramids. RC p8 ... Jan 21
85th annual report and forecast, tables, graphs. pp53-63 ... Jan 28
Labor feuds over maintenance, Construction Industry Joint Conference attacked. p141 ... Feb 18
National Construction Industry Conference sponsored by Chamber of Commerce. p93 ... Mar 17
Construction coexistence; help with solution, don't be part of problem. RC p29 ... Mar 24
Construction does not pay, stockholders told. CW p17 ... Apr 28
Florida construction booming; competition stiff, graphs,**. p40 ... May 5
Construction and cosmology. e p100 ... May 5
New business in 1959 by volume, table. p179 ... May 19
Expansion, big volume – but not all is sweetness and light in construction. e p116 ... May 26
**8 construction tricks for contractors. p118 ... Jun 23

• Backlog; Put-in-place
$118 billion on the drawing board – table. p56 ... Jan 28
ENR backlog hits record at $119 billion. p114 ... Feb 25

• Contract awards, Contracts
December 1959 is ahead of 1958, table. p64 ... Jan 7
$20.3 billion in 1959 contracts, table. p58 ... Jan 28
January awards dip, table. p82 ... Feb 4
Awards up 11%, February table. p70 ... Mar 10
March awards top February by 14%, table. p100 ... Apr 7
Heavy construction awards are up. CW p17 ... Apr 21
Demand pushing, awards jumping, graph. p21 ... May 5
April was best ever; table. p87 ... May 5
June is busting out all over. CW p15 ... Jun 9
Construction pace slackens; May table. p94 ... Jun 9

• Cost Indexes, Costs
ENR indexes renew their climb after three month's downward trend. p64 ... Jan 7
Costs up, but stability seen. p82 ... Feb 4
Construction cost index up, bldg cost index down. CW p17 ... Mar 10
Quarterly cost report. pp81-140 ... Mar 24
Cost rise could be slowed this year; indexes; graphs, tables. p86 ... Mar 24
How trends differ by region, graphs, tables. p90 ... Mar 24
More indexes to measure man-hours needed. p111 ... Mar 24
Cost index up again. CW p17 ... Apr 7
Indexes show new records. p87 ... May 5
Wage raises boost cost indexes. p94 ... Jun 9
Second quarterly cost report. pp ... Jun 23
Costs rise to a record, but will level off soon, graphs. p54 ... Jun 23
Hwy bid price indexes. p58 ... Jun 23
Irrigation and hydro cost indexes. p70 ... Jun 23
Bldg cost and price indexes. p73 ... Jun 23
Basic cost factors, Manpower, Machines, Money, Materials. p74 ... Jun 23
Costs by type of bldg. p82 ... Jun 23
How to guess costs. CW p37 ... Jun 23

• Financing
Less money for construction in new Budget, table. p21 ... Jan 21
Supply outlook for construction money, table, graph. p60 ... Jan 28
Democrats want more construction money. WO p19 ... Mar 3
Free loans spur public work construction. p76 ... Mar 3
No credit on Orlando, Fla, housing causes suit. CW p17 ... Mar 10
California to vote on $700m in bonds. p97 ... May 26

• Forecasts
Another big year ahead; heavy construction forecast table. p17 ... Jan 7
Record plans for record contract awards; heavy construction forecast table. p55 ... Jan 28
Construction trends, graphs, tables. p60 ... Jan 28
Electric companies will spend $143 billion on new construction in 20 yrs. CW p17 ... Jun 16

• Foreign
Exchange of American and Soviet construction experts. e p84 ... Jan 7
Canadian Construction Asso to teach labor law to contractors. p112 ... Jan 14
Canadian labor-management cooperation. p84 ... Feb 4
U.S. dollars build bases in Southeast Asia,*, map. p44 ... Feb 18
U.S. construction men in Moscow in the 1930's. RC p12 ... Feb 25
Underdeveloped areas will get more money from more sources. p24 ... Mar 3
Latin America: big, growing but tricky construction market, map. p73 ... Mar 3
Jordan enjoys a construction boomlet,*, map. p66 ... Apr 14
US contractor builds houses in Peru. WO p19 ... Apr 21
More U.S. aid for Korea expected. CW p17 ... May 5
British builders pinched. p181 ... May 19
Subsidized building eases housing shortage in France,**. p54 ... May 26
What U.S. foreign aid means to U.S. construction, table. p19 ... Jun 9
Foreign aid program survives intact. p44 ... Jun 23

• Materials see also: CONCRETE; LUMBER; STEEL; etc
Supply outlook for construction materials, table, graph. p63 ... Jan 28
Price fixing draws record fines. p81 ... Feb 4
Probe planned for materials prices. WO p23 ... Feb 18
Penna wants to "buy American". WO p19 ... Mar 3
Cement Enamel is registered trade name of vitreous wall surfacing. RC p35 ... Jun 23

• Materials and Labor Prices
Hourly wage rates, Building board & lath, insulation: p50 Jan 7, p164 Jan 28, p63 Mar 3, p64 Mar 31, p68 Apr 28, p67 June 2, p43 Jun 30.
Cement, aggregate, concrete; Paving brick, block, asphalt, road oils: p51 Jan 7, p66 Feb 4, p61 Mar 10, p81 Apr 7, p75 May 5, p65 Jun 9.
Iron and steel; Plumbing, heating, water, sewer and drain pipe: p82 Jan 14, p66 Feb 11, p67 Mar 17, p119 Apr 14, p89 May 12, p61 Jun 16.
Lumber, timber, plywood; Glass, explosives, chemicals, piles, ties: p69 Jan 21, p113 Feb 18, p117 Mar 24, p94 Apr 21, p139 May 19, p78 Jun 23.
Tile, brick lime; Paint, roofing; Plaster, bldg sheets & tubing: p163 Jan 28, p76 Feb 25, p63 Mar 31, p67 Apr 28, p82 May 26, p47 Jun 30.

• Scoreboard
Wage rates, Material prices, ENR index review: p60 Jan 7, p77 Feb 4, p68 Mar 10, p97 Apr 7, p84 May 5, p88 Jun 9.
New construction capital; Materials shipments; Employment and failures: p105 Jan 14, p82 Feb 11, p91 Mar 17, p148 Apr 14, p109 May 12, p77 Jun 16.
ENR cost indexes in 22 cities: p76 Jan 21, p138 Feb 18, p322 Mar 24, p133 Apr 21, p177 May 19, p267 Jun 23.
Backlog: p190 Jan 28, p110 Feb 25, p74 Mar 31, p94 Apr 28, p92 May 26, p55 Jun 30.
State & Municipal Bond Sales; Construction Machinery Price Indexes: p72 Mar 3, p77 Jun 2.

• Unit prices
Titan units to cost $31.6m; Tennessee bridge award won. p79 ... Jan 14
Penna flood control projects; St. Mary's River shoal dredging. p68 ... Jan 21
Rocket engine test stand, Edwards AF Base, Calif. p161 ... Jan 28
Wide spread sewerage bids; jet fuel line. p162 ... Jan 28
Fort Wayne sewage plant; La Guardia airport soil stabilization. p65 ... Feb 4
St. Louis, Mo, pool-bathhouse; steel sheet piling for Wisconsin harbor. p65 ... Feb 11
Akkar plains reservoir, Lebanon; Yellowstone road. p100 ... Feb 18
Mississippi sanitary sewers. p74 ... Feb 25
Pike Island locks, Ohio. p62 ... Mar 3
NYC subway jobs; Illinois water tank. p60 ... Mar 10
South Carolina water works; Chicago sewer in tunnel. p63 ... Mar 17
Titan Missile complexes, Calif. p124 ... Mar 24
Flood control tunnel, Va; D.C. hwys. p128 ... Mar 24
Ohio water treatment plant. p132 ... Mar 24
Baltimore deck girder bridge; Florida sewers. p134 ... Mar 24
Alabama earthfill dams. p136 ... Mar 24
German steel for Panama bridge. p140 ... Mar 24
Wash. railway slope protection; Los Angeles bldg tunnel. p80 ... Apr 7
Wash. water transmission line: four pipe alternates. p111 ... Apr 14
Fla hwy price trends; Hawaii missile sites. p114 ... Apr 14
Bonneville switchyard job; Alaska access road. p93 ... Apr 21
Twin hwy tunnels, Colorado. p63 ... Apr 28
Newell dam, Calif; Univ. of Wisconsin Science bldg. p71 ... May 5
Texas overpass; Kentucky hwys. p85 ... May 12
Hawaii paving job; North Dakota road; North Carolina hwys. p135 ... May 19
Prestressed pipe for conduit from Whale Rock dam, Calif. p79 ... May 26
Sprinkler system for AF Base landscaping; welded girder bridge, N.H. p66 ... Jun 2
New Jersey sewage system extensions. p64 ... Jun 9
Louisiana orifices; Ohio swimming pool; South Carolina hwys. p57 ... Jun 16
New Jersey cloverleaf interchange. p84 ... Jun 23
Elizabeth River Tunnel, Va; Hwy bid trends in New York, Wisconsin, Utah, W. Virginia. p86 ... Jun 23
Connecticut composite beam bridge bid two ways. p92 ... Jun 23
Oregon interchange. p96 ... Jun 23
Michigan paving bids; Louisiana hwy prices. p98 ... Jun 23
New York Narrows Bridge. p103 ... Jun 23
Bulk materials handling plant. p46 ... Jun 30

CONTRACTS & BIDS, CONTRACTORS see also: CONSTRUCTION; ENGINEERING
Contractor's bid lost in mail. CW p13 ... Jan 7

Nashville school board seeks halt to bid shopping. p62 ... Jan 7
Exchange of US and Soviet construction men. e p84 ... Jan 7
AGC plans to eliminate bid shopping? CW p17 ... Jan 14
Corps of Engineers requirements for purchase of project plans by bidders still disputed. WO p19 ... Jan 14
CGA to teach labor law to contractors. p112 ... Jan 14
Ontario employers form big association. p84 ... Feb 4
CCA meeting stresses labor. p85 ... Feb 4
J.D. Marshall at Minnesota AGC meeting: new collective bargaining demands are coming. p87 ... Feb 4
Management meetings in construction companies,*. p25 ... Feb 18
Bidders must guarantee boilers for NY state bldgs. p47 ... Mar 10
Discrimination: heat is on contractors. p101 and e p116 ... Mar 17
Contractor prices up — but less than costs, graph, table. p86 ... Mar 24
Politics flavor AGC annual meeting. p19 ... Mar 31
AGC told hwy program is clean — but investigators promise scandals,*. p20 ... Mar 31
New bid depository; San Diego subs establish curb on bid shopping. p26 ... Apr 7
Too many contractors and too few jobs; Detroit subs and bid shopping,*. p98 ... Apr 7
U.S. turbine maker wins bid dispute. p34 ... Apr 14
Owner's choice between contractor, sub; bid peddling. e p162 ... Apr 14
What price loose specs? e p162 ... Apr 14
Manila construction firm grows with Philippines economy. p56 ... Apr 21
Bad manners: contractors should not obstruct city streets. e p116 ... Apr 28
Designers, not contractors should engage testing laboratories. e p116 ... Apr 28
and RC p10 ... Jun 9
Lump sum contracts. RC p12 ... May 5
Outside contractors doing maintenance work protected. p89 ... May 5
Independent contractors test industry promotion in California. p115 ... May 12
Contracts and specs — urgent concern to plumbers. RC p10 ... May 19
Chain of Rocks dam bid is only 61% of estimate. CW p21 ... May 19
Contractors' new business in 1959, by volume; table. p179 ... May 19
Failures on the rise; table. p181 ... May 19
Advice against contractors' failures. e p116 ... May 26
Battle brewing in Boston: state contracts flow to out of state firms. CW p17 ... Jun 2
Contractors accused of defrauding NYState of $11m at Yonkers Raceway. p8 ... Jun 2
No more bitter bidders. CW p17 ... Jun 16
On the contractors inspection job. RC p25 ... Jun 23
AGC vs. NAPC on single or separate contracts. RC p9 ... Jun 23
Kaiser bows out of Feather River job. p43 ... Jun 23
**Eight construction tricks for contractors. p118 ... Jun 23

CONVEYOR BELTS see: HAULING; TRAFFIC & TRANSPORTATION

CORPS OF ENGINEERS
Purchase of project plans by bidders still disputed. WO p19 ... Jan 14
New chief to be appointed. CW p17 ... Mar 17
Corps names district engineers. p205 ... Mar 24
Corps layoff coming. WO p19 ... Apr 7
Delaware development plan, map. p23 ... Apr 7
Gen. Itschner's tour is extended two years,*. p29 ... May 19

COURT CASES see LEGAL DECISIONS

CRANES SEE: EQUIPMENT, Cranes

D

DAMS see also: POWER; RIVERS
Control dams for Mississipni, Atchafalaya, Old River,**, map. p32 ... Jan 7
Bering Strait dam to be studied. CW p37 ... Jan 28
World Bank checks design of four arch dams. p48 ... Jan 28
Piecemeal contracting: Aswan dam lesson. e p100 ... Feb 4
Unique design: buttress dam is arch at gorge,**. p65 ... Feb 18
Alabama earthfill dams unit prices. p136 ... Mar 24
Buttress type dams,**, diags, table. p30 ... Mar 31
Dam design competition rued. RC p11 ... May 12
Sink the Red Sea: dams at both ends proposed. CW p17 ... May 26

• American

Amistad Dam, Texas
Private vs public power fight is in store on US-Mexican dam. WO p17 ... Mar 31

Big Bend Dam, Missouri River
Earthwork starts soon,*. p62 ... Mar 24

Burns Creek Dam, Snake River
Legislation pushed. WO p15 ... Jun 30

Camanche Dam, Mokelumne River
East Bay Municipal Utility District approves construction. p26 ... Jun 16

Cannonsville Dam, Delaware River
Bids submitted on final stage of NYC's water supply system. p24 ... Jun 30

Chain of Rocks Dam, Mississippi River
Low bids is only 61% of estimate. CW p21 ... May 19

Flaming Gorge Dam, Utah
Construction postponed. "Buy American" turbine troubles. CW p17 ... Feb 4

Garrison Dam, Missouri River
*General view. p116 ... Jan 28

Gaston Dam, Roanoke River
Start of construction scheduled for August. p43 ... Jun 23

Glen Canyon Dam, Colorado River
Long strike is settled. p19 ... Jan 7
Baldwin-Lima-Hamilton wins turbine bid dispute. p34 ... Apr 14
Government denies Merritt-Chapman's claim. p147 ... Apr 14
Huge concrete bucket with radio control,*. p22 ... Apr 21
First concrete bucket delivered on second highest dam in the U.S. CW p17 ... Jun 16

Gorge High Dam, Skagit River
Merritt-Chapman will not be penalized for delays,*. p28 ... May 19

Ice Harbor Dam, Snake River
Big buckets make fishlift,*. p27 ... May 12
Swallows nesting in concrete trouble dam-builders. CW p15 ... Jun 9
Aggregate conveyor bridges river,*. p26 ... Jun 16

John Day Dam, Columbia River
Pumps dry up north shore enclosure,*. p23 ...

Mammoth Pool Dam, California
High earth dam plugs canyon,**, diag, map. p44 ... Apr 7
and correction RC p12 ... May 5

Mayfield Dam, Cowlitz River
Model of hydro project,*. p25 ... Mar 17

Mountain Sheep Dam, Snake River
Two high dams vie for one license, map. p62 ... Mar 24

Newell Dam, Calif.
Unit prices. p71 ... May 5

Nez Perce, Snake River
Two high dams vie for one license, map. p62 ... Mar 24

Noxon Rapids Dam, Clark Fork River
*General view. p94 ... Jan 28

Oroville Dam, Feather River
Low bid on Oroville-Wyandotte project. p26 ... Jun 16

Oxbow Dam, Snake River
Construction pushed for 1961 power,**. P26 ... Feb 25

Smith Mountain Dam, Roanoke River
Contract awarded for first of two dams. CW p21 ... Apr 14
Federal license obtained. CW p17 ... May 12
Work begun,*. p43 ... Jun 23

Wanapum Dam, Columbia River
*Aerial view of site. p115 ... Jan 28
Bentonite slurry stabilizes trench, keeps groundwater out,**. p42 ... Feb 11

• Foreign

Africa
Aswan dam starts. CW p13 ... Jan 7
Egypt, Russia start Aswan Dam, map. p26 ... Jan 21
Russia gets Aswan second stage. p47 ... Jan 28
Western consultants out of Aswan job. p30 ... Feb 18
Kariba dam delivers first power,*. p60 ... Feb 25
Sudan seeks loan for water and power project. p82 ... May 19
Kariba's power is on the line,*. p25 ... May 26

Brazil
Oros earth dam washes out, map. p25 ... Apr 7

Canada
Peace River Dam: high, wide and handsome,*. p53 ... Jun 9

China
Sanmen Gorge Dam for flood and drought control,*. p47 ... Jan 14

France
Malpasset failure report delayed as rock strata is checked. p26 ... Jan 21
Roselend Dam is buttress and arch combined,* p65 ... Feb 18
Malpasset design was good. CW p15 ... Mar 31
Malpasset failure is half solved. p25 ... Apr 7

India
Bhakra tunnel: flow is almost shut off,**, diag, graph. p50 ... Feb 25
Bhakra dam repair safe for monsoon rains. p58 ... Apr 21

Iran
Dez Dam: access road is mostly tunnels,*. p34 ... Apr 7

Italy
*Gioveretto buttress type dam. p30 ... Mar 31

Mexico
*Don Martin is world's oldest buttress type dam. p33 ... Mar 31

Morocco
Loan obtained for Mechra Klila dam and reservoir. p58 ... Apr 21

Spain
Court convicts Vega de Tera dam designers,*. p26 ... Mar 17
No condemnation of Vega de Tera designers. RC p32 ... Jun 23

Switzerland
Italians build arch dam bear Spluga Pass for Swiss hydro plants. p56 ... May 26

DEFENSE see also: AIRPORTS; BUILDINGS, Shelters; MISSILES; RADAR
Against Dept of Defense bridge clearance regulation. RC p13 ... Jan 14
Bridges crossing Interstate must have 16 ft clearance. p23 ... Feb 4
$1 billion asked for military construction, table of projects. p28 ... Feb 11
Discussion of hwy bridge clearance confusion,*. p28 ... Feb 18
Military bases in Southeast Asia,*, map. p44 ... Feb 18
Lower vehicles instead of raising bridges on interstate for missile transportation. RC p12 ... Feb 25
BMEWS for England: tracking radar will go inside dome,*. p23 ... Feb 25
Bridge clearance confusion. e p92 ... Mar 3
$1.1 billion authorized for military construction. p22 ... Mar 17
Railroads can transport missiles; no bridge clearances necessary. RC p12 ... Mar 31
Fallout shelter gamble. e p100 ... Mar 31
First hwy bridge raised to meet missile clearance. CW p17 ... Apr 7
Cornell Univ. architects plan a blast-proof town underground,*. p28 ... Apr 21
House Appropriations Committee asks cut in military construction. p34 ... May 19
Symposium on protective construction,* p22 ... May 26
New roles set for U.S. underground facilities in Hawaii. p23 ... May 26
Congress ups military construction. p27 ... Jun 9
Congress completes work on military construction. WO p15 ... Jun 30

DESALTING see: WATER SUPPLY, Treatment

DESIGN
Flexible structural frame and slab-on-ground: building over coal mine yields as ground settles,*. p39 ... Jan 7
Bridging the project gap between design and construction. RC p32 ... Jan 28
Model of aluminum moon house displayed. CW p37 ... Jan 28
Need to study thermal strains of structures. e p100 ... Feb 4
Correction of impact formulas for loads in helistop design. RC p8 ... Feb 25
AIA to honor five bldgs,**. p24 ... Feb 25
Savings in designing structural steel for continuity. RC p11 ... Mar 3
Composite design in steel and concrete. RC p6 ... Mar 10
Peg and plastics model for Panama Canal excavation,*. p22 ... Mar 10
Record for composite design construction, diags,*, table. p84 ... Mar 24
Geodesic prefab school can be built in two weeks. p160 ... Mar 24
Buttress type dams,**, diags, table. p30 ... Mar 31
Make design competitive. RC p8 ... Apr 21
Old frame plus new columns: adding 12 floors to NYC's office bldg,**, diags. p48 ... Apr 21
Unusual cable roof for Utica auditorium,**. p36 ... Apr 28
Steel from old bridge becomes part of new deck, N.Y.,*, diag. p53 ... Apr 28
Inspection and testing: designers, not contractors job. e p116 ... Apr 28
Two lanes are too little on long bridge. e p116 ... Apr 28
Imaginative engineers should explore the field of structural shapes. e p132 ... May 12
Developing the space-truss roof design, diag. p56 ... May 19
Shear transfer between steel beams and concrete decks can be simple,*. p45 ... May 26
and e p96 ... Jun 16
Plastic design cuts steel frame cost in Nashville plant,*, diag. p50 ... May 26
On the contractors job: surveys and inspection. RC p25 ... Jun 23
Plastic design in steel framing approved. p134 ... Jun 23
AISC rules for plastic design of steel: new tools and mental inertia. e p288 ... Jun 23
Tall timber design at a short price: lumber co. builds warehouse in Arkansas,**. p30 ... Jun 30

DOCKS see: PORTS AND HARBORS

DOMES see: ROOFS

DRAFTING see: EQUIPMENT, Tools and Instruments; SURVEYING

DRAINAGE see also: IRRIGATION
Mexico City builds drainage tunnel. p154 ... Mar 24
Jacking concrete pipe for California storm drain,**. p36 ... Jun 2
Drain tunnel for Mexico City's Lake Tequesquitengo,*. p112 ... Jun 23

DRAWING see: EQUIPMENT, Tools and Instruments; SURVEYING

DREDGING see: EARTHMOVING

DRILLING see: EQUIPMENT, Drills

DROUGHT see: IRRIGATION; WATER RESOURCES

DRYDOCKS see: PORTS AND HARBORS

E

EARTHMOVING, EXCAVATIONS see also: EQUIPMENT; HAULING; SOIL MECHANICS
Versatile hydraulic excavator,*. NP p40 ... Jan 7
Big loader lowered into small shaft for mucking rock, NYC subway,**. p46 ... Jan 21
Shoal dredging unit prices. p68 ... Jan 21
Dredge sinks in Delaware River third time. CW p37 ... Jan 28
Hawaii ponders lava defense; earth dike can divert but not stop flow,*. p25 ... Feb 11
Bentonite slurry stabilizes trench at Wanapum dam job,**. p42 ... Feb 11

(Continued)

(Continued)

Cover-then-cut tunnel excavation method,**. p38 .... Mar 3
Man-made landslide for hwy safety in New Jersey,*. p47 .... Mar 10
Self-propelled trencher is operated by one man. NP p55 .... Mar 17
Railway slope protection, riprap and gravel blankets unit prices. p80 .... Apr 7
Nuclear excavation. e p116 .... Apr 7
Earthmoving industry 11th Conference asks for lighter, faster, cheaper earthmovers. p28 .... Apr 14
Big power for pushing scrapers, earthmoving costs compared,**, tables, graphs. p30 .... Apr 28
Huge German-made excavator available in the U.S.,*. NP p69 .... May 12
Three piece high life boom fits hydraulic excavator. NP p90 .... May 19
Mammoth twin engine earthmover,*. NP p98 .... May 19
Dig we must to protect missile bases,*. p22 .... May 26
U.S. underground facilities in Hawaii. p23 .... May 26
Trencher digs wider ditches,*. NP p61 .... May 26
Trencher wheel shifts laterally,*. NP p61 .... May 26
Drilling, dredging and digging to deepen channel on the Great Lakes,**. p30 .... Jun 16

EARTHQUAKES see: ACCIDENTS; BUILDING CODES

ECONOMICS see also: CONSTRUCTION
"Buy American" question stalls turbine contracts. p108 .... Jan 14
More capital expected for small business. p77 .... Jan 21
"Buy American" delays dam projects. CW p17 .... Feb 4
Price fixing draws record fines. p81 .... Feb 4
Economy's health is good, Joint Economic Committee of Congress told. p87 .... Feb 11
Expenditures by electric utilities industry to hit record. p87 .... Feb 11
Boom in sales of small cars. p87 .... Feb 11
Pennsylvania wants to "buy American". WO p19 .... Mar 3
Do foreign purchases make a company a foreign concern? WO p19 .... Mar 3
"Buy American" ruled by Houston suburb. CW p17 .... Mar 10
Dept. of Commerce puts off again "Buy American" ban. p21 .... Mar 10
Foreign steel wins on big bridge. e p84 .... Mar 10
Outlook is up for capital spending, table. p21 .... Mar 17
Baldwin-Lima-Hamilton wins bid dispute in "Buy American" turbine issue. p34 .... Apr 14
Nixon likes Ike's economics. WO p19 .... Apr 21
Massachusetts price fixing charges in asphalt. p136 .... Apr 21
No more "Buy American" for road jobs. p23 .... Apr 28
Business plans record outlays, table. p96 .... Apr 28
Small bites for big problems is a lesson for to-day. e p100 .... May 5
New rules for U.S. surplus sales. p93 .... May 26
What foreign aid means to construction, table. p19 .... Jun 9
No more bitter bidders with "Buy American" issues. CW p17 .... Jun 16
Capital spending plans, tables. p79 .... Jun 16
Kaiser affiliate, cement co in Calif, charged with antitrust violation. p56 .... Jun 30

EDUCATION see also: ENGINEERING
How to use US national defense education funds. p71 .... Jan 7
Case Institute of Technology received Ford's grant. RC p8 .... Jan 21
AGC and education. RC p12 .... Jan 21
Funds for travel to science meetings abroad, on earthquake and mechanics. p53 .... Jan 21
R.A. Morgen directs Rose Polytechnic Institute. p65 .... Jan 21
Training program for Calif surveyors. p191 .... Jan 28
R. Rowe leaves Duke to be dean of Vanderbilt. p93 .... Feb 18
Construction industry charged with exclusion of Negroes from apprenticeship. p78 .... Mar 3
E.S. Burdell takes UNESCO post at Middle East Technical University,*. p58 .... Mar 10
Aptitude testing chart for plumbing apprentices. p334 .... Mar 24
More scholarships for engineers, table. RC p8 .... Apr 28
New dean of engineering, Univ of Southern Calif. p65 .... May 5
Educating civil engineers. e p92 .... Jun 2
Schooling, consulting studies discussed at NSPE meeting. p22 .... Jun 16
Emmett H. Karrer now professor at Ohio State,*. p158 .... Jun 23

ELECTRICITY see: POWER

ELECTRONICS, AUTOMATION
Project Turnkey for mail processing methods. p34 .... Jan 14
Computer, radios speed soil survey, map. p73 .... Feb 18
Concrete equipment has more automation. p28 .... Feb 25
Automation in batching. e p84 .... Mar 10
Automation spurs demand for direct current motors. p55 .... Apr 7
What you should know about computers,*, diags. p39 .... Apr 14
Second generation of computers, diags,*. p40 .... Apr 14
How to organize for profitable computer operation, diags,*. p48 .... Apr 14
How to program a digital computer, diags,*. p51 .... Apr 14
How to select the right computer,*, tables. p61 .... Apr 14
IBM new computer can perform 100 billion calculations a day. CW p17 .... May 5
Punch card automation for concrete plants. NP p106 .... May 19
Comments on ENR's report on computers. RCs p8 .... May 26
Toll credit card for interstate bridge,*. p38 .... Jun 30

ELEVATORS, LIFTING, SCAFFOLDING, see also EQUIPMENT
Scaffold system fits inside spherical tank. NP p53 .... Feb 4
Unusual scaffold for Capitol repairs,*. p53 .... Mar 17
Lift sling made of rubber grommets, aircraft cables. NP p53 .... Mar 31
Rolling scaffolds, ingenious formwork for Brooklyn garage job,**. p36 .... Apr 7
Elevator tower built first for Seattle parking garage,*. p63 .... Apr 21
Cincinnati hoisting problem: five months to plan weekend job of lifting boilers to roof. p63 .... Apr 21

ENGINEERING see also: CONSTRUCTION; CONTRACTS; CORPS OF ENGINEERS; EDUCATION
Consulting by professors. RC p8 .... Jan 14
Architects and engineers. RC p8 .... Jan 14
Philadelphia engineers tour Europe. RC p7 .... Feb 11
World's Fair engineering. e p100 .... Feb 11
In defence of teacher-consultants. RC p6 .... Feb 18
Architects' and engineers' registration differences. RC p12 .... Feb 18
The future civil engineer. e p128 .... Feb 25
Seven engineer-geologists to collect antarctic data. p58 .... Mar 3
On civil engineering: progress passes pioneers. RCs p8 .... Apr 7
Engineering unionism: new twist. p103 .... Apr 7
More scholarships for engineers, table. RC p8 .... Apr 28
Engineering neglected in rural counties. e p132 .... May 12
ENR's spot-check: how is business for consultants? p21 .... May 6
Engineers, keep up with research. RC p6 .... Jun 2
Educating civil engineers. e p92 .... Jun 2
Engineering unionism pushed; Engineering Employees Council planned. p97 .... Jun 9
Visitors from abroad should see interesting engineering projects. e p68 .... Jun 30

• Employment, Fees, Manpower
Engineer recruiting up, school enrollments down. EJC's manpower report. p22 .... Jan 7
Naval architect closes suit for design fee. p29 .... Jan 14
Consultants strike back: their work not more expensive than government's. CW p17 .... Jan 21
In defense of government engineers. RCs p8-p32 .... Jan 28
Consultants vs state engineers: who can stretch hwy dollars further?*. p41 .... Jan 28
Pennsylvania probes road costs, consultants vs government engineers. p25 .... Feb 4
Rising salaries make California consultants worry about their profits. p25 .... Feb 4
Higher pay for U.S. engineers. RC p12 .... Feb 18
It's cheaper for the government to hire consultants. CW p21 .... Feb 18
NSPE report defends consultant fees. p25 .... Mar 3
Consultants cost less. RCs p8 .... Mar 17
Consultants vs government engineers: time to close ranks. RCs pp10-32 .... Mar 24
Saving engineering manpower. e p100 .... Mar 31
Supervisory service hits engineer's net income. p141 .... Apr 14
For construction consultants. RCs p8 .... Apr 21
Engineers are urging raise for government employees. p28 .... Apr 28
Employers have an obligation to let their employees develop professionally. e p110 .... Jun 9

• Societies
American Institute of Architects
To honor five structures in April,**. p24 .... Feb 25
Professional soul searching. e p68 .... Jun 30
American Institute of Consulting Engineers
R.H. Tatlow becomes president. p66 .... Apr 7
American Society of Civil Engineers
Research and value of social sciences stressed at New Orleans meeting. p23 .... Mar 17
W. Wholcomb and S.B. Morris are presidential prospects. CW p17 .... Apr 28
Visitors Committee for engineers from abroad. e p68 .... Jun 30
Nominates Holcombe for president in 1961. p24 .... Jun 30
American Society for Engineering Education
Annual meeting; five ways to avoid engineer shortage,*. p20 .... Jun 30
Consulting Engineers Council
Worthwhile achievements. RC p10 .... Apr 14
Engineers Joint Council
Plans quarterly publication. CW p13 .... Jan 7
Ninth annual report on manpower. p22 .... Jan 7
Gets Science Foundation money for travel abroad. CW p37 .... Jan 28
Quarterly newspaper ready. CW p17 .... Feb 11
National Society of Professional Engineers
E. Hull and other nominated for July elections. p57 .... Feb 4
Survey of consultant firms' fees from government agencies. CW p21 .... Feb 18
Report defends consultant fees. p25 .... Mar 3
J.F. Fairman named to receive award,*. p61 .... Apr 28
Phillips Petroleum wins development award. p25 .... May 5
Establishes award for employers who care for employees' professional development. e p110 .... Jun 9
Annual meeting in Boston hears about schooling, consulting studies. p22 .... Jun 16
Society of American Military Engineers
Symposium on protective construction at Washington meeting. p22 .... May 26
Maj. Gen. A.M. Minton is new president,*. p66 .... May 26

ENGINEERING NEWS RECORD
Information Service Center. p263 .... Mar 24
Information Service Center. p219 .... Jun 23

EQUIPMENT see also: EARTHMOVING; HAULING
Equipment orders outpace awards, graph. p106 .... Jan 14
More liberal depreciation allowances expected. WO p19 .... Jan 21
Supply outlook for construction machinery, graph. p63 .... Jan 28
Hertz Co equipment rental service. CW p17 .... Feb 4
Manufacturers will probably keep prices steady, graph. p21 .... Feb 4
Is Russian equipment coming to US? CW p17 .... Feb 11
Machinery prices going higher. p151 .... Feb 18
Orders top record, graph. p151 .... Feb 18
Concrete equipment has more automation. p28 .... Feb 25
New depreciation rules in sight. p69 .... Mar 10
Outlook is up for capital spending, table. p21 .... Mar 17
Two manufacturers cut prices. CW p57 .... Mar 24
Industrial equipment cost, indexes; graphs, tables. p98 .... Mar 24
Record equipment order, graph. p320 .... Mar 24
H. Mayer becomes AED president. p65 .... Apr 7
Orders continue to climb, graph. p141 .... Apr 14
Businesspians record outlays, table. p96 .... Apr 28
Machinery orders take a dip, graph. p112 .... May 12
Most road pay to equipment men. p118 .... May 12
Restrained optimism for equipment manufacturers. CW p21 .... May 19
New rules for U.S. surplus sales planned, but opposed by CIMA. p93 .... May 26
Capital spending plans, tables. p79 .... Jun 16
Eight equipment firms become four. p80 .... Jun 16
Equipment orders stay high. p80 .... Jun 16
Blaw-Knox and T.L. Smith may form joint company. CW p13 .... Jun 30

• Compaction, Rollers, Vibrators, Crushers
Nine wheel self-propelled roller,*. NP p55 .... Mar 17
Line of tandem rollers. NP p195 .... Mar 24
German roller wheels have hinged blocks,*. p74 .... Apr 14
Compactor works at high speed,*. NP p82 .... Apr 14
Graderroller is self-lifting,*. NP p76 .... Apr 21
Jay tampers have increased tamping force. NP p81 .... Apr 21
Tamping roller travels either way equally well,*. NP p81 .... Apr 21
Engine stroke teams with tampers vibratorstroke,*. NP p82 .... Apr 21
Vibrating screed adjusts to slab mix. NP p97 .... May 19
Portable crushing plant features high output. NP p51 .... Jun 16
Crusher side setting may be read externally. NP p54 .... Jun 16
Self-propelled sheepsfoot roller needs no turnarounds,*. NP p140 .... Jun 23
Sheepsfoot roller also vibrates,*. NP p45 .... Jun 30

• Compressors
"Blue Brute" stacks cylinder stages. NP p84 .... Apr 21
Rotary compressor mounts on any tractor. NP p56 .... Apr 28

• Cranes, Hoists; Shovels and Diggers
FT Stacker, three wheeled fork lift carries 17 tons,*. NP p47 .... Feb 11
Koehring "Sprawler" crane lifts and carries 24 tons,*. .... Feb 11
High speed vertical boom ditcher,*. NP p86 .... Feb 18
Improved self-propelled 15 ton crane. NP p55 .... Mar 17
Big crane boom jackknifes to 8 ft when on the road,*. NP p201 .... Mar 24
Integrated controls for shovel and dragline. NP p53 .... Mar 31
Swing sling for lifting made of rubber grommets, aircraft cables. NP p53 .... Mar 31
Pull one pin, crane folds away. NP p82 .... Apr 14
Hoisting boilers to roof in Cincinnati takes five months to plan. p63 .... Apr 21
Three piece high lift boom for hydraulic excavator. NP p90 .... May 19
Crawler crane excavator can hoist to 9 tons. NP p56 .... Jun 2
Safety hoist goes up fast. NP p57 .... Jun 9
Clarklift fork-lift truck for concrete beams,*. NP p51 .... Jun 16
Air hoists operate without multiple reeving. NP p51 .... Jun 16
Backhoe attached without tools,*. NP p142 .... Jun 23
Rail-mounted tower crane rotates full circle,*. NP p148 .... Jun 23
Truck cranes and shovels available in three sizes. NP p152 .... Jun 23

• Drills
Self contained earth borer developed in France,*, diag. p55 .... Jan 21
Bucket type earth drill has crawler tracks. NP p60 .... Jan 21
Portable concrete drilling unit,*. NP p84 .... Feb 18
Core drill has air brakes,*. NP p69 .... Feb 25
PoleBore auger works in wide range of soils,*. NP p50 .... Mar 3
Self contained drilling rig,*. NP p199 .... Mar 24
Versatile diamond drill bores hole at any angle,*. NP p91 .... Apr 14
Mont Blanc tunnel job slowed; American and Swedish methods compared,**. p45 .... Apr 28
Magnet positions portable drill,*. NP p62 .... May 26
Concrete core drill uses induction-type motor. NP p45 .... Jun 30

• Engines, Power Units
"Buy American" question stalls turbine contracts. p108 .... Jan 14
Diesel engines for light and medium trucks. NP p59 .... Jan 21
Gear drive for vertical pumps permits engine testing,*. NP p69 .... Feb 25
Huge prime mover is coming. CW p17 .... Mar 10
Prime mover offers versatility,*. NP p199 .... Mar 24
180-cycle generator for concrete vibrators. NP p172 .... Mar 24
Automation spurs demand for direct current motors. p55 .... Apr 7
U.S. turbine maker wins bid dispute against importer. p34 .... Apr 14
Diesel engines designed for heavy duty. p92 .... Apr 14
Tournapull with new engine has more power. p146 .... Jun 23

• Graders
Ditching attachments for motor graders. NP p172 .... Mar 24

Graders have Preco blade control,*. NP p63 ..... May 5
Improved Cat graders range from 85 to 115 hp,*. NP p56 ..... Jun 2
Elevating attachment for Cat grader. NP p57 ..... Jun 9

• Loaders
Big loader lowered in sections into small shaft,**. p46 ..... Jan 21
Shovel-loader attachment for motor graders,*. NP p59 ..... Jan 21
Belt loader for motor grader,*. NP p47 ..... Feb 11
Ford's "Super-duty" loader can be mounted on tractor. NP p83 ..... Feb 18
More "push" in sheel loader,*. NP p49 ..... Mar 3
Underslung arms featured on front-end loader. NP p84 ..... Apr 21
Caterpillar announces line of wheeled loaders,*. NP p63 ..... May 5
Crawler mounted loader has 2¼ cu yd bucket. NP p89 ..... May 19
Loader has four wheel drive,*. NP p92 ..... May 19

• Scrapers
Tandem scrapers by LeTourneau-Westinghouse,*. NP p56 ..... Jan 14
Ease of handling claimed for all hydraulic motor scraper,*. NP p56 ..... Jan 14
Scraper bowl mounts on grader,*. NP p83 ..... Feb 18
Easy to handle motor scraper. NP p73 ..... Apr 21
Big power for pushing scrapers,**, cost tables, graphs. p30 ..... Apr 28

• Tools and Instruments see also: SURVEYING
Wheel in concrete saw assures straight lines. NP p50 ..... Mar 3
Sledge hammer gives way to mechanized post-driving. p46 ..... Mar 17
Tellurometer instruments now have dual functions,*. NP p174 ..... Mar 24
Transistorized pipe detector,*. NP p69 ..... May 12
Ultrasonic wave deflection meters water,*. NP p89 ..... May 19
Baby seismograph saves drilling,*. NP p89 ..... Jun 9
Cutting torch can slice thick metal,*. NP p57 ..... Apr 21
Wheel type calculator figures piping man hours. NP p57 ..... Jun 9
Pipe-marking tool cuts costs and time. NP p154 ..... Jun 23

• Tractors and Accessories
Caterpillar D6 ready,*. NP p53 ..... Feb 4
Speedail adds tractor shovel,*. NP p86 ..... Feb 18
Single-stick control for crawler tractors. NP p88 ..... Feb 18
Improved Cat D4 tractor,*. NP p49 ..... Mar 10
Tractor-shovel has 1-yd bucket,*. NP p53 ..... Mar 31
Power controlled winch for D tractors. NP p92 ..... Apr 14
No stalling in crawler tractor,*. NP p73 ..... Apr 21
Three aids to faster pushloading,*. NP p56 ..... Apr 28
Test tractor has no gears, *, diag. p62 ..... May 12
Hydraulic ripper for crawler tractor,*. NP p70 ..... May 12
Tractor shovel can turn in less than its length. NP p104 ..... May 19
Wheel tractor carries side boom. p139 ..... Jun 23

• Trucks and Vehicles
Swiss-made vehicle has 6 wheels, climbs over obstacles, tested by Clark,*. p25 ..... Mar 3
New trucks,**. 6 NPs pp56-62 ..... Apr 7
Road maintenance trucks mount snow equipment. NP p82 ..... Apr 21
Belt drive truck PTO has simplified design. NP p56 ..... Apr 28
Scoo-Crete concrete placing trucks,*. p90 NP ..... May 19
Versatile jeep can take different attachments,*. NP p92 ..... May 19
All hydraulic rear dump wagon carries 12 tons. NP p102 ..... May 19
Improved tire for utility tractors. NP p102 ..... May 19
Six wheel Diesel trucks designed for hard service. NP p60 ..... Jun 2
Fork lift truck casts beam, carries it to stockpile area,*. NP p51 ..... Jun 16

• Various
Twin engine street sweeper features independent drive. NP p61 ..... Jan 14
Integrator gives reading for dry flow meters. NP p49 ..... Mar 10
Allis-Chalmers rotary mowers for hwys and airports,*. NP p55 ..... Mar 17
Self propelled trencher operated by one man. NP p55 ..... Mar 17
Concrete mixers,*. 4 NPs pp 172, 173 ..... Mar 24
Paving breaker can drive spikes and sheeting. NP p174 ..... Mar 24
Screed attachment does work of spreading machine,*. NP p195 ..... Mar 24
Multiple hydraulic hammer has many uses,*. NP p81 ..... Apr 14
Vibrating screed can be set to walk along slab. NP p91 ..... Apr 14
All-purpose tailgate spreader,*. NP p76 ..... Apr 21
Self propelled machine spreads chips on roads. NP p92 ..... May 19
Strong paper improves packing. NP p92 ..... May 19
High efficiency claimed for hydraulic winch. NP p60 ..... Jun 2
**Eight construction tricks for contractors. p118 ..... Jun 23
New three-wheeled street sweeper,*. NP p142 ..... Jun 23
Chain clamp fastens rubber sleeve to pipe, NP p146 ..... Jun 23

EROSION see: SOIL MECHANICS

EXPLOSIVES
Arlanda jet airport, Sweden, drilled and blasted out of rocky terrain,**. p40 ..... Apr 7
Formula for proper blasthole spacing, diag, table. p53 ..... Apr 7
Working with caustic barium dust,*. p73 ..... Apr 14
Washington, D.C., warehouse neatly demolished by J. Loizeaux.**. p28 ..... Apr 21

F

FANNIE MAE (Federal National Mortgage Association) see: HOUSING

FIRE
Los Angeles experiments with school fires,*. p24 ..... Jan 21
Philadelphia fire and health safety campaign. CW p21 ..... Feb 18
Phila school for the blind had no sprinkler to fight fire. p26 ..... Mar 17
NFPA proposes new code: greater safety at less cost. p67 ..... Mar 24
Los Angeles wharf burns. p70 ..... Mar 24
Faulty wiring blamed in Philadelphia school fire in March. p25 ..... May 12

FISH
California wins suit over 1957 fish kill in San Fran Bay. p23 ..... Mar 10
Creek below McNary dam makes spawning salmon feel at home,*. p58 ..... May 5
Ice Harbor dam's buckets for fishlifting,*. p27 ..... May 12
California dam gate blends water to temperature fish like. CW p17 ..... May 26
Pennsylvania lab tests use fish to discover polluted water. p122 ..... Jun 23

FLOODS
Flood gates, Mississippi control dams,*. p34 ..... Jan 7
Red Chinese fight flood and drought,*. p47 ..... Jan 14
Penna flood control projects unit prices. p68 ..... Jan 21
Corps of Engineers to study flood plains. CW p17 ..... Feb 25
Tampa, Fla: flood control dam collapse may have been deliberate. CW p57 ..... Mar 24
Spring floods all over the country. CW p17 ..... Apr 7
Missouri dams pass a big test: no floods. p27 ..... Apr 14
Flood control projects prove out in the East. p26 ..... Apr 21
Flood plain zoning encouraged by Senate. WO p19 ..... Apr 28
Florida flood control construction is a steady long-term market,*. p40 ..... May 5
Tidal flood barrier planned across the Thames. p82 ..... May 19
Drain tunnel for Mexico City's flooded Lake Tequesquitengo,*. p112 ..... Jun 23

FLOORS

FLUORIDATION see: WATER SUPPLY, Treatment

FOUNDATIONS see: BRIDGES; BUILDINGS; CAISSONS; EARTHMOVING; PILES; SOIL MECHANICS

FRAMING see: BEAMS; CONCRETE; DESIGN; STEEL

FROST, ICE, SNOW
Sonic boom used to start safe snowslides in Glacier National Park. CW p17 ..... Feb 11
Arctic construction: nickel adds ductility. RC p6 ..... Feb 18
Seven engineer-geologists to collect antarctic data. p58 ..... Mar 3
Cold weather concreting at Bratsk hydro,*. p25 ..... Mar 10
Niagara Power is one of largest winter jobs,**. p30 ..... Mar 10
Squaw Valley parking lot made of snow,** p157 ..... Mar 24
Insulated forms for winter concreting on Ohio River lock. p55 ..... May 12
Automatic snow removal is a must. RC p10 ..... Jun 2

G

GARAGES see: BUILDINGS

GARBAGE see: HEALTH

GAS see PIPES; UTILITIES

GENERAL SERVICES ADMINISTRATION
Federal bldg plans come alive,**. p17 ..... Jun 30

GIRDERS see: BEAMS

GROUTING
Symposium on injection grout for prestressed concrete in Norway. p68 ..... Feb 18

H

HAULING, MATERIALS HANDLING see also: EARTHMOVING; EQUIPMENT; TRANSPORTATION
Bridge will carry coke conveyor in Cleveland,*. p27 ..... Jan 14
Project Turnkey testing mail processing methods. p34 ..... Jan 14
Stacker is cable supported,*. NP p84 ..... Feb 18
Hauling a long girder for Bronx overpass,**. p30 ..... May 19
All hydraulic rear dump wagon. NP p102 ..... May 19
Aggregate conveyor bridges Snake River at Ice Harbor dam site,*. p26 ..... Jun 16
Bulk materials handling plant in Texas; unit prices. p46 ..... Jun 30

HEALTH
Atlanta incinerator pays its own way,*. p112 ..... May 12

HEATING see: AIR CONDITIONING, HEATING

HIGHWAY DESIGN see also: LANDSCAPING
Oil paintings help public understand future projects,*. p51 ..... Jan 14
Toll charges are not easy to display,*. RC p8 ..... Jan 21
Highway research and the city; traffic problems,*. p23 ..... Jan 21
Ingenious hwy barriers. RC p8 ..... Mar 3
Urban expressways and BPR. e p84 ..... Mar 10
Illinois tests various base materials for low cost roads, diags. p79 ..... Apr 14
Tough plastic buttons for traffic lanes. NP p90 ..... May 19
Treated timber piles support hwy pavement, Florida,*. diag. p41 ..... May 26
New fence on California highway center strip,*. p122 ..... Jun 23
Edge striping becomes common on state roads. p39 ..... Jun 30

HIGHWAYS see also: PAVING; SAFETY; TRAFFIC
Interstate clearance clearing up. WO p15 ..... Jan 7
Senate-Cabinet exchange opens road finances fight. p24 ..... Jan 7
BPR reduces red tape for contract lettings. p24 ..... Jan 7
Highest hwy awards this week. CW p17 ..... Jan 14
Vehicles run 7 days a week on AASHO test road,*. p23 ..... Jan 14
Interstate progress: 5332 miles built so far. p26 ..... Jan 14
In defense of the hwy program. e p100 ..... Jan 21
Congress hearings start next week. WO p39 ..... Jan 28
Consultants vs state engineers: who can stretch hwy dollars further?*. p41 ..... Jan 28
ARBA's Cincinnati convention gets set to counter road critics,*. p42 ..... Jan 28
Annual review, major projects: interstate is dominant issue,**. p126 ..... Jan 28
Congress probes road program changes and costs; Blatnik asks questions,*. p21 ..... Feb 11
Nello Teer warns of threat to Interstate program. p32 ..... Feb 11
Will small cars cut road funds. p87 ..... Feb 11
Hwy bidding trends, table; contract competition. p28 ..... Feb 18
BPR looks into bridge clearance confusion,*. p28 ..... Feb 18
Hwy program investigation. e p164 ..... Feb 18
Hwy users must pay for hwy construction. RC p8 ..... Feb 25
Lease-back hwys may help finances. CW p17 ..... Feb 25
Roads funds requested. WO p19 ..... Feb 25
Road probers hear cost of bridge clearances. p22 ..... Feb 25
House Committee starts work on road financing measures. p25 ..... Mar 3
Urban expressways and BPR. e p84 ..... Mar 10
1961 road aid: quarterly allocations to ease spending. p26 ..... Mar 17
Hwy costs, management, planning. RCs p32 ..... Mar 24
Hwy price indexes. p106 ..... Mar 24
AGC meeting told hwy program is clean, but investigators promise scandals,*. p20 ..... Mar 31
BPR joins investigators of a much tested hwy in Tulsa, Okla. p24 ..... Apr 7
1961 will be big year for hwys. CW p21 ..... Apr 14
Hwy hearings begin again. WO p19 ..... Apr 21
Hwy market bounces back, graph; tables of state contract plans 1960-65. p34 ..... Apr 21
Hwy program needs promotion and public support. e p156 ..... Apr 21
Investigation of interstate program administration starts, Blatnik's cast*. p21 ..... Apr 28
No more "Buy American" for road jobs. p23 ..... Apr 28
Competition worsens, price index for BPR's composite mile of hwy drops. CW p17 ..... May 5
Politics shape hwy hearings. WO p19 ..... May 5
Highway hearings end round one,**. p21 ..... May 12
Most road pay goes to equipment men. p118 ..... May 12
Hwys alone won't do. RC p10 ..... May 19
What next in Blatnik's BPR investigations? CW p21 ..... May 19
National Hwy Users Conference worry over scandal effects. p31 ..... May 19
AASHO takes steps for wider controls. p31 ..... May 19
House votes usual ABC federal aid for 1962 and 1963. p34 ..... May 19
End of round one in hwy hearings. e p198 ..... May 19
U.S. road funds: still waiting. WO p19 ..... May 26
Highway committee gets file of fresh scandals. p26 ..... May 26
Expanded hwy research coming. WO p19 ..... Jun 2
Probe spurs reforms: BPR tightens controls, AASHO studies will bring new procedures. p21 ..... Jun 2
Who needs expressways. RC p6 ..... Jun 9
Final state allocations, table. WO p17 ..... Jun 9
More than one-fifth of 41,000-mile Interstate system open, map. p48 ..... Jun 23
Hwy bid price trends, indexes, unit prices; how states figure their indexes. pp 57-68 ..... Jun 23
Proposals considered for expanded program of research,*. p129 ..... Jun 23
States get record hwy users taxes. p270 ..... Jun 23
Time to build roads. e p288 ..... Jun 23
Senate Committee adds $200m for ABC hwy program. p19 ..... Jun 30
Tollroad safety up. p39 ..... Jun 30

• American
Alaska
Access road unit prices. p93 ..... Apr 21

California
New slipform paver makes smooth roads,** p38 ..... Jan 14
* U.S. 40 five sections reach full freeway status. p135 ..... Jan 28
Rex slipform paver has internal vibrators,*. p55 ..... May 12
New center strip fence designed for greater safety,*. p122 ..... Jun 23

D.C.
Unit prices. p128 ..... Mar 24

Delaware
Plans tollroad into Maryland. WO p17 ..... Mar 31
No new contracts awarded. CW p13 ..... Jun 30

Florida
Unit prices. p114 ..... Apr 14
Florida construction booms,**. p40 ..... May 5

(Continued)

(Continued)

Treated timber piles support concrete pavement, St. Augustine,*, diag. p41 ..... May 26
State Road Dept. assumes blame for Jacksonville highway failure. p42 ..... Jun 23

Georgia
Inspection failure caught. CW p17 ..... May 26

Hawaii
Interstate hwy funds recommended. p28 ..... Jan 21

Illinois
AASHO road test, Ottawa, moves into last lap,*. p23 ..... Jan 14
Low cost roads testing, diag. p79 ..... Apr 14

Kentucky
Governor plans lease-back hwys? CW p17 ..... Feb 25
Winchester-Campton toll road planned. CW p17 ..... Apr 28
Unit prices. p85 ..... May 12

Louisiana
Unit prices. p98 ..... Jun 23

Maryland
Getting billboard bonus? p28 ..... Mar 3
Planed tollroad into Delaware. WO p157 ..... Mar 31

Massachusetts
Turnpike extension: bill before legislature tied with Prudential Center, Boston,*. p111 ..... May 12

Michigan
New expressways produce 77% accident rate drop. p32 ..... Feb 11
Hwy Dept uses sound waves to map soils, diags. p69 ..... May 19
Paving unit prices. p98 ..... Jun 23

Minnesota
Color coated roads aid drivers, diag. p55 ..... Apr 7

New Hampshire
Dix Seal asphalt resurfacing mix proves out,*. p50 ..... May 12

New Jersey
Man-made landslide on Rt. 611,*. p47 ..... Mar 10
Sledge hammer gives way to mechanized post driving. p46 ..... Mar 17
Neoprene modified asphalt to surface Turnpike shoulders,*. p162 ..... Mar 24
Hwy awards will be increased this year. p74 ..... Apr 28
Middlesex County, R. 1, interchange unit prices. p84 ..... Jun 23

New York
NYC completes Brooklyn – Queens link. p22 ..... Jan 14
Law suits on night traffic noise on Thruway. p24 ..... Jan 14
$83m expressway approved for lower Manhattan. p25 ..... Feb 11
Thruway post vacant as Brill resigns. p70 ..... Feb 25
Rejected stretch of Thruway is being rebuilt. p26 ..... Apr 21
World's Fair sparks big road plans, map. p23 ..... Apr 28
Hauling a long girder for Bronx hwy overpass,**. p30 ..... May 19
East Hudson Pkwy Authority will operate Westchester parkways. p80 ..... Jun 2
Highway bid trends. p86 ..... Jun 23
UTM grid coordinates highway condition maps. p124 ..... Jun 23

North Carolina
Slipform paver used for road around Moncure,*. p40 ..... Jan 14
Unit prices. p136 ..... May 19

North Dakota
Ten hour work day set for hwy job; unit prices. p135 ..... May 19

Ohio
Clermont County tightening subdivision road standards. p151 ..... Feb 18

Oregon
* Banfield Freeway, Portland. p142 ..... Jan 28
Engineers, planners dispute freeway route in Portland, map. p24 ..... Jun 9
Eugene interchange unit prices. p96 ..... Jun 23

Pennsylvania
Legislature probes road costs, consultants vs government engineers. p25 ..... Feb 4
Three regional engineers appointed. p56 ..... Mar 17

Rhode Island
Special vote on $200m road plan. p181 ..... May 19
Interstate program rushed, as voters endorse proposal. p270 ..... Jun 23

South Carolina
Unit prices. p57 ..... Jun 16

Texas
* Fort Worth four level intersection. p126 ..... Jan 28
Fort Worth opens last section of east-west freeway,*. p35 ..... Apr 7

Utah
Violation of Hatch Act. CW p13 ..... Jan 7
C.T. Burton to head road commission. p56 ..... Feb 11
Hwy price trends. p90 ..... Jun 23

West Virginia
Hwy price trends. p92 ..... Jun 23

Wisconsin
Hwy Commission shows the public oil paintings of future projects,*. p51 ..... Jan 14
Hwy price trends. p90 ..... Jun 23

Wyoming
Three hwy engineers promoted. p45 ..... Jan 7
Hwy division advances seven engineers. p64 ..... Jan 14

• Foreign
Novel prestressed beams go into Olympic road in Rome,*, diag. p40 ..... Mar 3
U.S. hwy consultants may find a job in Scotland. CW p17 ..... Mar 17
Roads have key role in Iran's development,**, map. p142 ..... Mar 24
British expressways may straddle the rails. p146 ..... Mar 24
Double deck hwy planned in Britain. p146 ..... Mar 24
India plans to double road system in 20 yrs. p154 ..... Mar 24
Brasil is planning a 1000 miles road into the interior. CW p17 ..... Apr 21
French superhighway passes by and under Orly Airport,*, maps. p104 ..... Jun 23

HOISTS see: EQUIPMENT, Cranes & Hoists

HOMES see: BUILDINGS; HOUSING

HOTELS see: BUILDINGS

HOUSING see also: BUILDINGS; CITIES; CONSTRUCTION: PUBLIC WORKS
Another mortgage prop may be coming. WO p15 ..... Jan 7
Usury laws make housing dip. p106 ..... Jan 14
Eisenhower wants housing changes. WO p19 ..... Jan 21
FHA announces Canadian lumber grade-marking rules. p78 ..... Jan 21
NAHB plans housing starts at 1.5m. CW p37 ..... Jan 28
Housing tussle starts in Congress. WO p39 ..... Jan 28
NAHB Chicago convention skirts endorsement of "antirecession" measures. p46 ..... Jan 28
Dip in housing starts expected because of tight money. p189 ..... Jan 28
$1 billion federal mortgage prop? p23 ..... Feb 4
A modern housing project in Pittsburgh. p28 ..... Feb 4
NAHB opposes lumber-marking order. p81 ..... Feb 4
Usury, government backed mortgages, FHA. p81 ..... Feb 4
Changes in federal housing policy? WO p19 ..... Feb 11
Private housing starts going down. CW p21 ..... Feb 18
Housing starts still strong. CW p17 ..... Feb 25
Calif carpenters to invest in mortgages. CW p17 ..... Mar 17
A better year for housing? WO p19 ..... Mar 17
Fewer controls, more education; stabilization of homebuilding industry needed. p93 ..... Mar 17
Savage for Slusser at HHFA. WO p59 ..... Mar 24
Public housing costs and prices. p104 ..... Mar 24
More homes erected than statistics show. WO p19 ..... Apr 7
Opinions on public housing. WO p19 ..... Apr 7
Lower FHA down payments coming. WO p23 ..... Apr 14
FHA eases lumber grading rule. p34 ..... Apr 14
U.S. homebuilders find overseas markets where grain surplus funds are available. WO p19 ..... Apr 21
Cautious optimism for homebuilders, graph. p135 ..... Apr 21
Honolulu has big housing plans. p136 ..... Apr 21
Senate Housing subcommittee: goal is 1.6m houses a year. p98 ..... Apr 28
Money eases. CW p17 ..... May 5
Congress battle on housing shapes up. p24 ..... May 5
Florida construction booms,**. p40 ..... May 5
VA opposes extending home loans. WO p23 ..... May 19
Congress moves housing bills nearer Ike's veto. p28 ..... May 19
Subsidized building eases housing shortage in France,**. p54 ..... May 26
Mass housing contracts break records. CW p17 ..... Jun 2
Housing market seen good through 1980. p79 ..... Jun 2
Look for a jump in housing starts. p21 ..... Jun 16
House, Senate and veto shape housing bill. p46 ..... Jun 23
Love, mortality and housing forecasts. RC p9 ..... Jun 30
Housing starts still sluggish. CW p13 ..... Jun 30

HYDROELECTRIC POWER see: DAMS; POWER; RIVERS

I

ICE see: FROST, ICE

INCINERATORS see BUILDINGS; HEALTH

INDUSTRIAL PARKS, PLANTS, SITES see: BUILDINGS; CITIES

INDUSTRIAL WASTES see: WATER POLLUTION

INSULATION, SEALANTS, ADHESIVES
Thorospan sealant and calking compound bonds many materials. NP p49 ..... Mar 10
Standards approved for testing dry-set mortar. p168 ..... Mar 24
New methods improve glass fiber bond to concrete. p170 ..... Mar 24
Epoxy resin coat improves steel-to-concrete bond. p170 ..... Mar 24
Crack filler seals leaky lock on Mississippi,*. p57 ..... May 5
Synthetic insulates pipe for extreme temperatures. NP p97 ..... May 19
Adhesive replaces screw for installing juncture box,*. NP p154 ..... Jun 23
Forest Products Lab produces glue that bonds everything,*. p130 ..... Jun 23

IRRIGATION see also: RIVERS, WATER RESOURCES
Chinese fight flood and drought,**. p46 ..... Jan 14
*Wahluke siphon will carry irrigation water to Columbia Basin region. p120 ..... Jan 28
Irrigation and hydro cost indexes. p106 ..... Mar 24
Congress OKs San Luis project, Calif. p28 ..... May 26
Irrigation and hydro cost indexes. p70 ..... Jun 23

J

JACKS
Telescopic screw jacks designed for falsework. NP p55 ..... Mar 17
Jacking concrete pipe for a California storm drain,** p36 ..... Jun 2

JOINTS see: BEAMS; DESIGN

JORDAN
Enjoys construction boomlet,*, map. p66 ..... Apr 14

L

LABOR see also: CONTRACTORS
Labor-management White House conference planned. CW p17 ..... Jan 14
Effects of steel dispute. p110 ..... Jan 14
Supply outlook for construction manpower. p62 ..... Jan 28
Canadian labor-management cooperation. p84 ..... Feb 4
Who will man tomorrow's jobs? Construction looks for skilled workers. p116 ..... Feb 25
Labor issues shape up in Congress. p117 ..... Feb 25
U.S. steps up anti-bias campaign; Negroes on federal construction jobs. WO p19 ..... Mar 10
How to measure labor productivity. p110 ..... Mar 24
"Education" on Capitol Hill; Richard Gray, Secretary Mitchell,*. p329 ..... Mar 24
New anti-discrimination rules coming. p330 ..... Mar 24
Employment is up. p332 ..... Mar 24
Anti-discrimination efforts fail. WO p19 ..... Apr 7
Taft-Hartley legislation is half way through the House. WO p23 ..... Apr 14
Construction employment still lags. CW p17 ..... Apr 21
Nixon committee changes plans; racial discrimination to be tackled at pre-job level. p145 ..... Apr 21
Senate refuses to revive the McClellan Committee. p145 ..... Apr 21
GSA takes on discrimination problem. WO p19 ..... Apr 28
Mechanization is an uneasy labor issue. p89 ..... May 5
GSA puts pressure on firm to hire Negro electricians in Washington D.C. p118 ..... May 12
Labor-Management talks close in agreement. CW p17 ..... May 26
Negroes rejected for D.C. job as electricians. p102 ..... May 26
Negro American Labor Council formed. p84 ..... Jun 16
Missile work raises old labor issue. p58 ..... Jun 30

• AFL-CIO, Unions
Unions push Taft-Hartley change. WO p19 ..... Jan 14
Pressure for Taft-Hartley change on boycott exemption. p81 ..... Jan 21
Unions and contractors support Taft-Hartley change. WO p19 ..... Feb 4
Who will head Bldg and Construction Trades Dept. CW p17 ..... Feb 11
Arbitration plan fades, Miami meeting reluctant to decide on disputes. CW p17 ..... Feb 11
Miami meeting; Industry seeks end to strikes. p89 ..... Feb 11
R.J. Gray ends long union career,*. p90 ..... Feb 11
Unions lose members, Labor Dept finds. p90 ..... Feb 11
Labor feuds over maintenance. p141 ..... Feb 18
Teamsters plan major campaign in South. p142 ..... Feb 18
Meany seeks end of Negro ban. p116 ..... Feb 25
Building trades pick new chief, C.J. Haggetty,*. p22 ..... Mar 3
AFL-CIO promises discrimination probe in apprenticeship issue. p78 ..... Mar 3
Heat is on contractors in discrimination issue. p101 and e p116 ..... Mar 17
Plumbers withdraw from IUD. CW p57 ..... Mar 24
Phila engineers exempted from city union. p83 ..... Mar 31
Engineering unionism: new twist. p103 ..... Apr 7
Antitrust laws applied to labor union demands. p104 ..... Apr 7
Plumbers union quits industrial union group. p105 ..... Apr 7
The teamster tangle thickens. p104 ..... Apr 7
Union of engineers votes IUE tie-up. p118 ..... May 12
AFL-CIO attacks practices that nullify pay boosts. p98 ..... May 26
ESA union loses an election. p102 ..... May 26
Craft unions win NLRB ruling. p95 ..... Jun 9
U.S. Court of Appeals snarls teamster monitors. p96 ..... Jun 9
Back door organizing curbed by NRLB. p97 ..... Jun 9
Engineering unionism pushed: Engineering Employees Council planned. p97 ..... Jun 9
Negro American Labor Council formed. p84 ..... Jun 16

• Apprenticeship see: EDUCATION

• Boycotts
Denver case; complicated secondary boycott problems. p81 ..... Jan 21
Employers prime boycott guns. p142 ..... Feb 18
Boycott change is losing ground. p77 ..... Mar 3
Secondary boycott on Detroit Edison job; new clues in picketing puzzle. p141 ..... Apr 21
Secondary boycott rejected in Omaha. p118 ..... May 12
What does the boycott bill do, N.J. contractors ask. p95 ..... Jun 9

• Contracts, Hiring
Brown-Olds remedy held unjust in illegal hiring practices. CW p17 ..... Jan 21
Unions will ask Congress to upset Brown-Olds rule. p83 ..... Jan 21
NLRB defends Brown-Olds rule. p86 ..... Jan 21
Court questions Brown-Olds in American Dredging Co's case. p191 ..... Jan 28
Area bargaining called beneficial by teamsters. p91 ..... Feb 11
Collective bargaining technique in Buffalo. p144 ..... Feb 18
NLRB loses Brown-Olds cases. p71 ..... Mar 10
Phila carpenters sign contract year in advance. p72 ..... Mar 10
Steel industry accused in union shop issue. p73 ..... Mar 10
California carpenters seek statewide contract. p101 ..... Mar 17

Mountain-Pacific laborers and contractors agree on new hiring plan. p102 ..... Mar 17
Teamsters plan to demand national labor contracts. p102 ..... Mar 17
Kaiser group and the steel collective bargaining. p102 ..... Mar 17
Court rejects hiring rule, Mountain-Pacific safeguards can be omitted. p102 ..... Apr 28
Bargaining stiff, wages rise. p98 ..... May 26
Two year pacts continue. p96 ..... Jun 9
Long term contracts; deferred increases continue high. p83 ..... Jun 16
Arbitration clauses in labor contract given free rein. p57 ..... Jun 30

• Jurisdictional disputes, NLRB
NLRB promotes joint board use. p111 ..... Jan 14
NLRB ruling shows how complicated secondary boycott problem is; Denver case. p81 ..... Jan 21
Labor board must decide work disputes. p142 ..... Feb 18
AFL-CIO can not go too far in solving craft-industrial unions conflicts. CW p17 ..... Mar 3
NLRB loses Brown-Olds cases. p71 ..... Mar 10
Who settles work disputes. p96 ..... Mar 17
NLRB on hot cargo ban. p147 ..... Apr 14
NLRB speed up. CW p17 ..... Apr 21
NLRB sets a faster pace to settle disputes. p102 ..... Apr 28
NLRB protects outside contractors doing maintenance work. p89 ..... May 5
AFL-CIO tries all over again on jurisdictional disputes. p186 ..... May 19
Craft unions win NLRB ruling. p95 ..... Jun 9

• Legislation
Canadian Construction Asso to teach labor law to contractors. p112 ..... Jan 14
Unions will ask Congress for law changes; Annual National Legislative Conference. p83 ..... Jan 21
Senate minimum wage bill. p58 ..... Jun 30

• Strikes and Pickets
Glen Canyon Dam strike is settled. p19 ..... Jan 7
Ban on hot cargo clauses upheld. p83 ..... Jan 21
American Motors president urges strike prevention study. p87 ..... Feb 4
Construction seeks end to strikes. p89 ..... Feb 11
Loophole in picketing ban, Calif case shows. p144 ..... Feb 18
Joint plan may avoid strikes in Buffalo. p144 ..... Feb 18
Picketing bill wins approval. p72 ..... Mar 10
Sheet metal union sued for strike damages in NYC. p83 ..... Mar 31
Contractors hit situs picketing. p86 ..... Mar 31
New clues in picketing puzzle. p141 ..... Apr 21
Employers hit picketing bill. p101 ..... Apr 28
Organizational picketing called competitive right. p90 ..... May 5
House report clarifies picketing bill. p181 ..... May 19
Back door organizing and picketing curbed by NLRB. p97 ..... Jun 19
Construction industry's picketing bill limited. p274 ..... Jun 23
Iron workers end two strikes. p275 ..... Jun 23
AEC test site struck over use of technicians. p275 ..... Jun 23
Missile work raises old issue: who should build bases. p58 ..... Jun 30
Plasterers end Chicago strike. p59 ..... Jun 30

• Unemployment, Welfare
Industry promotion fund set in Philadelphia. p72 ..... Mar 10
Rhode Island contractor must pay partial disability claim. p332 ..... Mar 24
Retirement plan for self-employed. WO p23 ..... Mar 19

• Wages
Increases are tapering off; 1958 vs 1959 table. p69 ..... Jan 7
NYC electricians try to trim costs. p83 ..... Jan 21
Court denies travel pay to Paducah, Ky, carpenters. p83 ..... Feb 11
Pay of nonunion workers increased in Hawaii. p91 ..... Feb 11
Davis-Bacon on minimum wages is condemned by employer association. p71 ..... Mar 10
Labor leader criticizes extra pay for hazards. p102 ..... Mar 17
Wage increases will upset cost stability, graphs. p82 ..... Mar 24
Electrical workers win a 20 cent increase. p105 ..... Apr 7
Supreme court limits wage-hour law. p142 ..... Apr 14
Government will not absorb Glen Canyon wage increases, M-C & S's claim denied. p147 ..... Apr 14
Wages follow last year's pace. p142 ..... Apr 21
West Coast workers get deferred wage increases. p102 ..... Apr 28
Wages are still going up. p115 ..... May 12
Bargaining stiff, wages rise. p98 ..... May 26
Prevailing wage bill vetoed. p103 ..... May 26
Pay boosts assured for year ahead. p83 ..... Jun 16
Prevailing wages criticized. p83 ..... Jun 16
Inflationary wage boosts can lead to destruction. p86 ..... Jun 16
Senate minimum wage bill affects construction. p58 ..... Jun 30

LADDERS see: EQUIPMENT, Various

LAKES
New plan for Great Lakes diversion. p24 ..... Mar 3
Channel deepening on the Great Lakes has moved into Canadian waters,**. p30 ..... Jun 16

LANDSCAPING
Jetted slurry sows grass seed,*. p54 ..... Jan 14
Unit prices for sprinkler system and landscaping, New Mexico AF Base. p66 ..... Jun 2

LEASE PURCHASE see: GENERAL SERVICES ADMINISTRATION

LEGAL DECISIONS
Contractor held to bid error. p155 ..... Jan 28
Court admits parol evidence to determine intent. p155 ..... Jan 28
Contingency fee case dismissal is reversed. p160 ..... Jan 28
Owner held to have forfeited right to contest decisions of architect. p239 ..... Mar 24
Contract may limit size of engineering fees. p239 ..... Mar 24
To prevent performance is a breach of contract. p239 ..... Mar 24
Extra cost of substitute recovered by contractor. p240 ..... Mar 24
Hwy job imposes an obligation to the public that cannot be dodged by delegation to a subcontractor. p240 ..... Mar 24
Order for extra work may be approved orally. p240 ..... Mar 24
Subcontractor is liable under indemnity clause. p244 ..... Mar 24
Contractor is liable for acts of negligence. p78 ..... Apr 7
Meaning of a contract determined by intent. p79 ..... Apr 7
Contractor is not liable for injury to third party after owner accepts his work. p149 ..... Apr 14
Contractor must prove substantial performance. p125 ..... May 19
Qualification of expert witnesses is within the discretion of the court. p125 ..... May 19
Person suing to recover on a contract should not be required to perform a useless act. p125 ..... May 19
Third party rights are limited. p126 ..... May 19
Joint husband-wife ownership of land upsets lien. p126 ..... May 19
Courts are not concerned with merits of contract. p126 ..... May 19
Owner held not liable for breach of contract. p128 ..... May 19
Contract variations are not fatal. p175 ..... Jun 23
Liquidated damages approved. p175 ..... Jun 23
Language of contract not easily upset. p175 ..... Jun 23
Owner could sue contractor on indemnity clause. p176 ..... Jun 23
Repudiation of contract gives choice of action. p176 ..... Jun 23
Contractor allowed to sue as third party in creditor beneficiary law. p178 ..... Jun 23
Breach of contract issue subject to arbitration. p178 ..... Jun 23
Various remedies exist for breach of contract. p182 ..... Jun 23
Contractor not entitled to damages he caused. p184 ..... Jun 23
Oral evidence allowed on date of contract. p186 ..... Jun 23

LEVEES see: DAMS; EARTHMOVING; FLOODS; RIVERS

LIGHTING
• Flush lights built into runway, Idlewild Airport. p149 ..... Jan 28
Runway marker lights tilt if hit. NP p98 ..... May 19
Flush lights mark airport runways. NP p62 ..... May 26
Aluminum grills for French tunnel lighting,*. p106 ..... Jun 23

LOCKS see also: DAMS; RIVERS
Controls of the Mississippi,*. p36 ..... Jan 7
*Main lock on Ohio River, Louisville. p98 ..... Jan 28
*Wilson lock, p118 ..... Jan 28
Pike Island locks, Ohio, unit prices. p62 ..... Mar 3
Crack filler seals Algiers lock leaks, Mississippi,*. p57 ..... May 5
Insulated forms for winter concreting on Ohio River Lock #41. p55 ..... May 12
Corps' tests on two new locks may achieve future economics,*, diag. p38 ..... May 19
Jamming of sluice-gates of power plants controlled. p132 ..... Jun 23

LUMBER
Framing lumber grade marks coming. p62 ..... Jan 7
Prices drop. CW p17 ..... Jan 21
Canadian grade-marking rules set. p78 ..... Jan 21
NAHB opposes lumber grade-marking order. p81 ..... Feb 4
FHA lumber grading rule signals price boosts. p320 ..... Mar 24
Prices are moving down; ENR lumber demand indicator, graph. p81 ..... Mar 31
Lumber-grading rule eased. p34 ..... Apr 14
Michigan pipeline of wood staves,*. p120 ..... Jun 23
U.S. Forest Products Lab celebrates golden anniversary,*. p 130 ..... Jun 23
Solution of lumber future cost estimates,*, graph. p268 ..... Jun 23
Crossett Lumber Co builds all wood warehouse,**. p30 ..... Jun 30

M

MANAGEMENT
Management meetings in construction companies,*. p25 ..... Feb 18
Fruin-Colnon annual management meeting,*. p146 ..... Feb 18
Better management. e p164 ..... Feb 18

MAPPING see: SURVEYING

MARINAS see: PORTS AND HARBORS

METALS
Nickel in steel ads ductility. RC p6 ..... Feb 18
Brass and Copper Co provides customer counseling. p78 ..... Feb 18
Metal coatings investigated. p79 ..... Apr 14
Iron ore mining a processing project in Wyoming. CW p37 ..... Jun 23

MISSILES see also: AIRPORTS; DEFENSE; ELECTRONICS; RADAR
Titan missile program is in trouble. WO p19 ..... Jan 14
Titan units unit prices. p79 ..... Jan 14
Annual review, major projects, **. p126 ..... Jan 28
Edwards AF Base rocket engine test stand unit prices. p161 ..... Jan 28
$180m worth of contracts to be let on ICBM bases. p26 ..... Feb 4
Utah plant for Minutemen missiles planned. CW p21 ..... Feb 18
Base-building is on schedule, table of Atlas and Titan projects,*. p27 ..... Feb 18
Last Bomarc bases up for bid. p23 ..... Feb 25
Nike-Zeus anti-missile missile construction stepped up. WO p59 ..... Mar 24
Titan complexes, Calif, unit prices. p124 ..... Mar 24
Missiles can be transported by railroads instead of hwys. RC p12 ..... Mar 31
Goodbye Bomarc, hello Atlas and Minuteman. WO p17 ..... Mar 31
First Minuteman ICBM installation in Minnesota. p22 ..... Mar 31
Building Minuteman bases at Canaveral,**. p22 ..... Mar 31
Coral Islands become training grounds for Nike-Zeus,**. p24 ..... Mar 31
Hawaii missile sites unit prices. p114 ..... Apr 14
Outs in Aeronautics and Space Administration bldg funds. p26 ..... Apr 21
Two Titan sites chosen and Atlas bids opened. p24 ..... Apr 28
Dig we must to protect missile bases, meeting of Military Engineers told,*. p22 ..... May 26
More money for Titan and Minuteman, less for Bomars. p27 ..... Jun 9
Missile base jobs should go to contractors not aircraft makers. CW p37 ..... Jun 23
Missile work raises old labor issue. p58 ..... Jun 30

MODELS see: DESIGN

MONORAILS see: RAILROADS

MORTGAGES see: HOUSING

N

NATIONAL Associations, Societies etc. — see subject

NAVIGATION see: PORTS; RIVERS

NOISE CONTROL see: ACOUSTICS

NUCLEAR PHYSICS see: ATOMIC ENERGY

O

OFFICES see: BUILDINGS

P

PARKING see: BUILDINGS, Garages; CITIES; TRAFFIC

PAVING see also: AIRPORTS; ASPHALT; CONCRETE; HIGHWAYS
New slipform pavers used in Calif and North Carolina,**. p39 ..... Jan 14
Bituminous paving binder made from soft coal. CW p17 ..... Jan 21
Hydraulic coring machine for pavement tests. NP p60 ..... Jan 21
Big job on 2-miles long runways, Dulles Airport,**. p42 ..... Feb 4
"Air cushion" sidewalks tested in Calgary, Canada. p88 ..... Feb 18
Savings on using slipform paver. RC p10 ..... Mar 10
Automation in batching, e p94 ..... Mar 10
Snow makes Squaw Valley parking lot,**. p157 ..... Mar 24
Paving breaker can drive spikes and sheeting. NP p174 ..... Mar 24
Screed attachment does work of spreading machine,* p195 ..... Mar 24
Coal tar as binder in hwy paving can cause cancer. CW p15 ..... Mar 31
Arlanda, Sweden, jet airport is big job,**. p40 ..... Apr 7
Color coated roads aid drivers, diag. p55 ..... Apr 7
Slip forms in paving. RC p14 ..... Apr 14
Asbestos-asphalt surface mixes tested,*. p70 ..... Apr 21
Stronger reinforced concrete pavements,**. p44 ..... May 12
Machine for vibrating wire fabric into concrete pavement,*. p46 ..... May 12
Asphalt resurfacing mix proves out in New Hampshire: Dix-Seal method,*. p50 ..... May 12
Rex slipform paver has internal vibrators, used in California,*. p55 ..... May 12
Hawaii paving job unit prices. p135 ..... May 19
Jet blast rips asphalt runway,*. p26 ..... May 26
and RC p9 ..... Jun 30
Reinforced concrete pavements: joints are a nuisance. RC p12 ..... Jun 16
New hinged road fabric,*. NP p45 ..... Jun 30

PHOTOGRAPHY, PHOTOGRAMMETRY
Sewer inspection by camera. p23 ..... Jan 7

PIERS see: BRIDGES; CAISSONS; PORTS

PILES AND PILEDRIVING
Small harbor steel sheet piling unit prices. p65 ..... Feb 11
Precast pile columns for Honolulu shopping center,**. p40 ..... Feb 25
Preboring sinks piles the quiet way for Queens sewer,*. p25 ..... Apr 28
and RC p9 ..... Jun 30
Treated timber piles support concrete hwy pavement in Fla,**. diag. p41 ..... May 26
Test load on large piles checks driving formula, Seattle viaduct,**. p50 ..... Jun 9

PIPES AND PIPELINES see also: SEWERS; WATER SUPPLY
*Giant pipe section, Detroit pumping station. p108 ..... Jan 28

(Continued)

(Continued)

Jet fuel line unit prices. p162 ..... Jan 28
Manual device cold-draws tees in copper tubing,*. NP p54 ..... Feb 4
Continuous concrete pipe cast in place with inflatable forms,*. NP p83 ..... Feb 18
Sled is dragged to offshore platform to install San Diego pipeline,*. p64 ..... Feb 25
Pipe wrapping tape combines butyl and vinyl. NP p50 ..... Mar 10
Plastic pipe brings ocean water to Mass. lobster station. p160 ..... Mar 24
Big year for pipeline construction in US and Canada, graph. p21 ..... Apr 21
Legal obstructions on Canadian-Californian natural gas pipeline. CW p17 ..... May 12
Transistorized pipe detector,*. NP p69 ..... May 12
Mechanized hand cutter for pipe,*. NP p90 ..... May 19
Improved conduit-pipe bender,*. NP p97 ..... May 19
Foam type pipe insulation for extreme temperatures. NP p97 ..... May 19
Increased capacity for pipelayer. NP p62 ..... May 26
Jacking 1200 ft of concrete pipe for storm drain in California,**. p36 ..... Jun 2
Michigan pipeline of wood staves,*. p120 ..... Jun 23
Chain clamp fastens rubber sleeve to pipe,*. NP p146 ..... Jun 23
Pipe-marker cuts costs and time. NP p154 ..... Jun 23

PLASTICS, RUBBER
Steel dome built on nylon balloon,**. p28 ..... Jan 7
Small relief maps in plastic*. NP p40 ..... Jan 7
Cookies on steel grid stop skidding,*. p54 ..... Jan 14
Nylon roofs for portable bldgs, US exhibit at Morocco and Turkey fairs,*. p48 ..... Jan 21
Russian and US plastics compared. p56 ..... Jan 21
Big plastic sewers tried in Massachusetts and in Ontario,*. p26 ..... Feb 4
Nylon balloon speeds winter construction at Providence post office,*. p34 ..... Feb 18
Pipe wrapping tape combines butyl and vinyl. NP p50 ..... Mar 10
Thorospan sealant bonds many materials and textures. NP p49 ..... Mar 10
Vinyl sea water intake brings ocean to lobsters in Mass. p160 ..... Mar 24
Neoprene modified asphalt used to surface N.J. turnpike shoulders,*. p162 ..... Mar 24
Lining materials for canals: film still good after 10 yr burial. p168 ..... Mar 24
Epoxy-resin coat improves steel-to-concrete bond. p170 ..... Mar 24
Polyethelene bolsters for reinforcing bars eliminate rust spots. NP p82 ..... Apr 14
Closed cell synthetic insulates pipe for extreme temperatures. NP p97 ..... May 19
Tough plastic buttons mark traffic lanes. NP p90 ..... May 19
Peeling plastic off Union Carbide's bldg panels is tough job,*. p24 ..... Jun 2
Adhesive replaces screw for installing juncture box,*. NP p154 ..... Jun 23

PLATFORMS
*Seagoing platform for Hyperion sewage outfall, Los Angeles. p100 ..... Jan 28

PLYWOOD see: LUMBER

PORT OF NEW YORK AUTHORITY
$136m of construction scheduled p32 ..... Feb 11

PORTS AND HARBORS
Rivers and harbors bill allows 10% of any project cost for recreational facilities. CW p15 ..... Jun 9

● **American**
Houston saves by building wharf on land, bringing water to it,**. p44 ..... Jan 14
Small Wisconsin harbor steel sheet piling unit prices. p65 ..... Feb 11
Modern techniques for soil survey for Rhode Island breakwater construction, map. p73 ..... Feb 18
Bids coming on big Los Angeles harbor expansion,*. p27 ..... Mar 17
Los Angeles wharf burns. p70 ..... Mar 24
Chicago awards contract to extend its Navy Pier in Lake Michigan. p32 ..... May 26
Construction to start on $30m San Francisco port terminal. p97 ..... May 26

● **Foreign**
Korea's Inchon rehabilitation finished. p66 ..... Feb 18

POWER see also: ATOMIC ENERGY; DAMS; EQUIPMENT, Engines & power units; RIVERS; UTILITIES
Russia is catching up with US; drive for more electric power. CW p13 ..... Jan 7
Russian and U.S. power. p25 ..... Feb 25
Hydro and irrigation cost indexes. p106 ..... Mar 24
Hydro and irrigation cost indexes. p70 ..... Jun 23

● **American**
Arizona revises Bridge Canyon—Marble Canyon hydro plans on Colorado River. p24 ..... Jan 7
Last word on Tuscarora land at Niagara. CW p17 ..... Mar 10
All winter fast pace on Niagara job,**, map, diag. p30 ..... Mar 10
High court ends Niagara case, reservoir size firms up, map. p24 ..... Mar 17
Model of Mayfield hydro project,*. p25 ..... Mar 17
Bids to open for Spring Creek tunnel, Central Valley power project. p70 ..... Mar 24
Dispute over Indian land at Niagara should teach a lesson. e p344 ..... Mar 24
Big Creek development includes 8 power houses; Mammoth Pool project,**. maps. p44 ..... Apr 7
Bonneville switchyard job unit prices. p93 ..... Apr 21
Power needs are on the rise. WO p19 ..... Apr 28
Niagara power plants doubles as bridge,*. p26 ..... Jun 30

● **Foreign**
Reports on Russian power development. CW p37 ..... Jan 28
French to test full size tidal power generator near St. Malo. p78 ..... Feb 18
Cold weather concreting at Bratsk hydro,*. p25 ..... Mar 10
Egypt to study Quattara hydro in the Western Desert Depression. p53 ..... Mar 10
Quebec leads in Canadian power development. p151 ..... Mar 24
Power cables span a mile in Spain,*. p76 ..... May 19
Saskatchewan Power Co. builds Squaw River hydro plant. p80 ..... May 19
Dam the Red Sea and obtain power, Egyptian oceanographer proposes. CW p17 ..... May 26
Labrador hydro on Unknown River planned. p43 ..... Jun 30

POWER PLANTS AND UNITS see: POWER see also: EQUIPMENT, Engines and Power Units

PRICES see: CONSTRUCTION

PUBLIC WORKS see also: CONGRESS; CONSTRUCTION; HOUSING; STATE LEGISLATION
Rockefeller plans a public works "bank" in NY State. p62 ..... Jan 7
Public works no panacea for a depression. e p84 ..... Jan 7
Public works gets set to sprint, graphs, tables. p21 ..... Apr 7
Public Works committees authorize 64 federal bldgs. p98 ..... Apr 28
Public works stockpile in New York state. CW p17 ..... May 5
New Mexicans take over Senate Public Works committees. WO p19 ..... May 5
Public works appropriations bill coming. WO p19 ..... May 26
House votes $1.4 billion for public works; appropriations table. p25 ..... Jun 2
Public Works Committees approve $800m of new federal bldgs. WO p39 ..... Jun 23
New federal bldgs,**. p17 ..... Jun 30
Senate Public Works Committee adds to hwy funds. p19 ..... Jun 30

PUMPS
Gear drive for vertical pumps,*. NP p69 ..... Feb 25
Split case pumps designed for water supply systems. NP p49 ..... Mar 10
Diaphragm pump measures corrosive chemicals. NP p50 ..... Mar 10
Rugged metering pump is moderately priced. NP p53 ..... Jun 16
Underwater pumps in range of sizes. NP p148 ..... Jun 23
Diaphragm slurry pump of aluminum alloy,*. NP p152 ..... Jun 23

R

RADAR, RADIO see also: DEFENSE; ELECTRONICS; MISSILES
Computer, radios speed soil survey, map. p73 ..... Feb 18
BMEWS for England: tracking radar will go inside dome,*. p23 ..... Feb 25
BMEWS ear relays pulses for probing gear,*. p45 ..... Mar 10
Sugar Grove radio telescope will cost $22m more. CW p17 ..... Apr 21
*Radio telescope in Green Bank, W. Va. p26 ..... Apr 28
Maine radio station for Polaris submarines almost completed,*. p26 ..... May 5
Astronomer urges construction of radio telescope ½ mile diameter. p28 ..... May 5
Construction and cosmology. e p100 ..... May 5
*Texas Tower radar station. p68 ..... May 26
Radio telescope construction in Puerto Rico will be delayed. WO p39 ..... Jun 23

RADIOACTIVITY see: ATOMIC ENERGY

RAILROADS see also: TRAFFIC & TRANSPORTATION
Earthslide derails Great Northern cars near Seattle,*. p19 ..... Jan 7
Big loader lowered into small shaft to muck rock, NYC subway,**. p46 ..... Jan 21
Philadelphia's commuter rail plan. p48 ..... Jan 28
Railroad comeback in Germany and Italy. CW p17 ..... Mar 3
Concrete crossties installed near Tampa, Fla. CW p17 ..... Mar 3
Toronto's cover-then-cut subway,**. p37 ..... Mar 3
Railroads test concrete crossties. p26 ..... Mar 10
Difficulties in financing Seattle monorail project. CW p57 ..... Mar 24
Rails expect to gain back some business they lost. p66 ..... Mar 24
Elevated railway to link Moscow with airport. p148 ..... Mar 24
Seattle monorail plan revived. CW p17 ..... May 5
Passenger cableway across Zurich Lake,*. p75 ..... May 19
Prestressed concrete railroad ties tried in Calif,*, diags. p87 ..... May 19
Concrete railroad ties will be cheap at twice the price. CW p17 ..... May 26
Rail transit comeback. e p110 ..... Jun 9
Railroads experiment with asphalt-treated roadbeds. p124 ..... Jun 23

RECLAMATION see also: SOIL MECHANICS
Bureau of Reclamation plans anti-evaporation tests with mono-molecular film. p48 ..... Feb 18
Politics push Calif reclamation project. WO p19 ..... May 5

RESEARCH AND TESTS
Bolting vs riveting tested,*. p53 ..... Jan 14
Jetted slurry sows grass seed,*. p54 ..... Jan 14
Plastic and grit on steel grid stops skidding,*. p34 ..... Jan 14
Highway research and the city,*. p23 ..... Jan 21
Self contained earth borer developed,*, diag. p55 ..... Jan 21
Russians and U. S. compare plastics. p56 ..... Jan 21
Water purification unit can be dropped by air. p56 ..... Jan 21
Structures do not settle but they heave in Cleveland shale,**. p46 ..... Feb 4
Lake Superior bottom chartered in 3-yr survey. p48 ..... Feb 4
National Research Council appoints Augustus B. Kinzel. p57 ..... Feb 4
More test data needed on thermal behavior of structures. e p100 ..... Feb 4
$1.3m to be spent on bituminous research and improvement. p28 ..... Feb 11
Full scale steel bridge tests at Northwestern University,*. p75 ..... Feb 18
French to test full size tidal power generator. p78 ..... Feb 18
Australians try new way to slow evaporation. p78 ..... Feb 18
Metal producer provides customer counseling. p78 ..... Feb 18
Research is a must, ASCE meeting told. p23 ..... Mar 17
The more we know the less we know, ACI meeting finds. p61 ..... Mar 24
Dry wall method cuts time, costs,**, diag. p167 ..... Mar 24
Plastic film still good after 10 yr burial. p168 ..... Mar 24
New standards for testing dry-set mortar. p168 ..... Mar 24
Improvements of glass fiber bond to concrete. p170 ..... Mar 24
Epoxy-resin coat improves steel-to-concrete bond. p170 ..... Mar 24
To raise research funds. e p344 ..... Mar 24
Color coated roads aid drivers, diag. p55 ..... Apr 7
Automation spurs demand for direct current motors. p55 ..... Apr 7
Bldg Research Institute asks for more rigorous bldg standards. p28 ..... Apr 14
Illinois to test base materials for low cost roads, diags. p79 ..... Apr 14
USBR investigates metal coatings. p79 ..... Apr 14
Testing manila rope safety nets,*. p65 ..... Apr 21
Fallout tags raindrops with radioactive tracer. p66 ..... Apr 21
Asbestos-asphalt surface mixes tested,*. p70 ..... Apr 21
Research pays dividends in NY State housing. p70 ..... Apr 21
BRI conference on performance of buildings is most useful. e p156 ..... Apr 21
Designers, not contractors, should engage testing laboratories. e p116 ..... Apr 28
Monomolecular film cuts evaporation of water,*. p57 ..... May 12
Test tractor has no gears,*, diag. p62 ..... May 12
Corps' tests on two new locks may achieve future economics,*, diag. p38 ..... May 19
Test for prestressed concrete railroad ties,*, diags. p87 ..... May 19
Shear transfer between steel beams and concrete decks can be simple,*. p45 ..... May 26
Expanded program of highway research proposed,*. p129 ..... Jun 23
U. S. Forest Products Lab celebrates golden anniversary,*. p130 ..... Jun 23
Oregon dunes yield fresh water. p132 ..... Jun 23
Control gear for sluice-gate jamming. p132 ..... Jun 23
Plastic design in steel framing approved. p134 ..... Jun 23

RESERVOIRS, TANKS see also: BUILDINGS, Storage; WATER SUPPLY
Mono-molecular anti-evaporation tests planned. p48 ..... Feb 18
Australians try new methods to slow evaporation. p78 ..... Feb 18
Lebanon reservoir unit prices. p110 ..... Feb 18
Chemical stops water seepage through soil. NP p49 ..... Mar 10
Illinois water tank unit prices. p60 ..... Mar 10
Mammoth Pool reservoir capacity corrected. RC p12 ..... May 5
Hong Kong reservoirs dry, water bought from Red China,*. map. p49 ..... May 12
Monomolecular film cuts water evaporation,*. p57 ..... May 12

RIVERS see also: DAMS; LOCKS; WATER RESOURCES
Controls for Mississippi, Atchafalaya, Old River,**, map. p32 ..... Jan 7
Multiple purpose river project spending may set record, table. p26 ..... Mar 3
Rivers and harbors bill allows 10% of any project cost for recreational facilities. CW p15 ..... Jun 9

Colorado River
Arizona wins over California. p27 ..... May 12
A new course for the Colorado, maps; what it means to construction. p25 ..... May 19
Decision on the allotment of Colorado River water. e p92 ..... Jun 2
Lower interest rate on Upper Colorado power. WO p15 ..... Jun 30

Columbia River
Development prospects are unclear. p34 ..... Feb 18
Postponement of negotiations kills chance for action this year. CW p13 ..... Jun 30

Delaware River
Eleven major projects in development plan, map. p23 ..... Apr 7

Feather River
Consultants will review river project. p26 ..... Feb 4
Governor wins contractors' support for river project. CW p15 ..... Jun 9
Low bid on Oroville-Wyandotte project. p26 ..... Jun 16
Kaiser withdraws project bid. p43 ..... Jun 23
Bonds sold, contract let on Oroville-Wyandotte. p24 ..... Jun 30

Gandak River, India
India and Nepal forge irrigation and power development plans. p65 ..... Feb 18

Mississippi River
New control dams will keep flow,**. p32 ..... Jan 7

Missouri River
Dams pass their big test: no floods. p27 ..... Apr 14

Ohio River
ORSANCO looks at acid mine drainage,*. p61 ..... May 19

Old River
Controls will keep Mississippi flow,**, map. p32 ..... Jan 7
*Control project is 50% complete. p124 ..... Jan 7

Peace River
Development prospects are unclear. p34 ..... Feb 18

Plan is feasible. CW p15 ... Mar 31

Rhine River, France & Germany
New plans for power and navigation,*. p57 ... Feb 25

Roanoke River
Three new dams planned. p43 ... Jun 23

St. Mary's River
Shoal dredging unit prices. p68 ... Jan 21

Snake River
Two high dams vie for one license, map. p62 ... Mar 24
Snail's pace for Snake project. WO p19 ... May 26

Thames River, England
Tidal flood barrier planned. p82 ... May 19

Wabash River
Illinois and Indiana sign pact for valley development. CW p17 ... Feb 11

ROCKS see: EARTHMOVING; SOIL MECHANICS

ROOFS
Building a steel dome on nylon balloon for Illinois repair shop,**. p28 ... Jan 7
Barrel-shell roof for Providence mechanized post office,**. p30 ... Jan 14
Hyperbolic paraboloid for Oakland Air Terminal,*. p27 ... Jan 21
*Concrete dome for Univ of Illinois Assembly Hall. p66 ... Jan 28
*Aluminum dome for Am Soc of Metals HQ, Ohio. p66 ... Jan 28
Cast iron bearing breaks in suspended steel roof, Idlewild Airport. p32 ... Feb 4
Roof cost figures challenged. RC p7 ... Feb 11
Fabricated steel trusses make roof that forms church walls,*. p37 ... Feb 18
Concrete shielding dome for Indian Point A-power plant,*. diag. p43 ... Mar 17
Dramatic thin-shell roof for Mich bank,*. p34 ... Apr 7
Prestressing stabilizes unusual cable roof, Utica auditorium,**. p36 ... Apr 28
Crane sets plywood panels for church with a pleated roof,*. p26 ... May 12
Hyperbolic paraboloid collapses on Dallas service station,*. p27 ... May 19
Mass producing a 4-acre space truss roof for Upjohn Co. office near Kalamazoo,**. p54 ... May 19
Concrete cantilever shells for German hangar,*. p50 ... Jun 2

RUNWAYS see: AIRPORTS; PAVING

S

SAFETY see also: ACCIDENTS; FIRE; HIGHWAYS
Plastic cookies on steel grid stop skidding,*. p54 ... Jan 14
Safety committee checks Arizona jobs. p87 ... Feb 4
New Michigan expressways produce 77% accident rate drop. p32 ... Feb 11
Philadelphia fire and health safety campaign. CW p21 ... Feb 18
Unions and contractors try new approach to safety. p96 ... Mar 17
H. K. Ferguson Co receives "No injury award of merit". CW p15 ... Mar 31
Reshoring vital to safety. e p116 ... Apr 7
Testing manila rope safety nets,*. p65 ... Apr 21
H. K. Ferguson Co, Cleveland, makes safety work, receives award,*. p81 ... Jun 2
New fence on California highway center strip,*. p122 ... Jun 23
Tollroad safety up. p39 ... Jun 30
Edge striping on state roads. p39 ... Jun 30

SANITATION see: HEALTH; SEWAGE; WATER POLLUTION

SAWS see: EQUIPMENT, Tools

SCAFFOLDING see: ELEVATORS, SCAFFOLDING

SCHOOLS see: BUILDINGS

SCRAPERS see: EARTHMOVING; EQUIPMENT

SEALANTS see: INSULATION, SEALANTS

SEISMOLOGY see: SOIL MECHANICS

SEWERS see also: PIPES; WATER POLLUTION
Sewer inspection by camera. p23 ... Jan 7
Annual review, techniques and trends, major project,**. p94 ... Jan 28
Plastic sewers get tryout in Mass. and Ontario,*. p26 ... Feb 4
Sewerage aid veto could fail. WO p19 ... Feb 25
Sewerage aid veto will not slow work; state-by-state table. p23 ... Mar 3
Sewerage aid veto. e p92 ... Mar 3
Two ejectors added to sewage equipment line. NP p84 ... Apr 21
International meeting in Manhattan College spotlights biologic treatment. p28 ... Apr 28
Sam Baxter takes reporters on a sewer inspection,*. p54 ... Apr 28
NY state allows private sewage systems. p25 ... May 12
Sludge collector line expanded,*. NP p70 ... May 12

• American

California
San Bernardino will reclaim sewage effluent. p67 ... Mar 24

Delaware
Wide spread on bids; unit prices. p162 ... Jan 28

Florida
Unit prices. p134 ... Mar 24
Miami's water and sewers under C. F. Wertz,*. p75 ... May 12

Illinois
Chicago sewer in tunnel unit prices. p63 ... Mar 17
Contractor builds low cost tunneler for boring Chicago sewer,*, diags. p42 ... Mar 17

Indiana
Fort Wayne sewage plant unit prices. p65 ... Feb 4

Maryland
W. Va. Pulp & Paper Co.'s wastes treated in new activated sludge plant,*. p28 ... Mar 10

Massachusetts
Air blows up on Boston sewer job. CW p17 ... Apr 7

Mississippi
Sanitary sewers unit prices. p74 ... Feb 25

New Jersey
Unclogging sewer dispersal pipes in NYC harbor,*, diag. p32 ... Jan 21
Three kinds of pipe priced for Mercer County sewage system extension, unit prices. p64 ... Jun 9

New York
NYC offers sludge cargo to Yonkers treatment plant. CW p21 ... Apr 14
Prehaboring sinks piles the quiet way for Queens sewer,*. p25 ... Apr 28
State Okays private sewage systems. p25 ... May 12

Pennsylvania
*Pittsburgh treatment plant. p107 ... Jan 28
Pittsburgh beats sludge odor. CW p17 ... Mar 3
Newsmen inspect Philadelphia sewer,*. p54 ... Apr 28

Virginia
Chantilly Airport sewage will not be discharged upstream from D. C. intake. CW p17 ... May 12

Washington
Seattle's 1957 failure brings sewer inspection by camera. p23 ... Jan 7
Seattle sewerage plan will cost $108m. p24 ... Jun 2

West Virginia
Huntington ends Ohio holdout, builds treatment facilities. p26 ... Feb 4

• Foreign
Mechanical mole excavates Toronto trunk sewer tunnel,*. p30 ... Feb 18

SHIPWAYS see: PORTS AND HARBORS

SKYSCRAPERS see: BUILDINGS

SLUM CLEARANCE see: CITIES; HOUSING

SOCIETIES see subject, e.g. ENGINEERING, RESEARCH etc.

SOIL MECHANICS & FOUNDATIONS
West Delaware tunnel was a proving ground for new mining methods,*. p21 ... Jan 14
Seismology probes bay bottom for San Francisco tunnel,*. p26 ... Jan 14
Against erosion of slopes: jetted slurry sows grass seed, stabilizes soil,*. p54 ... Jan 14
Cleveland shale: iron pyrites expand, bldgs heave,**. p46 ... Feb 4
La Guardia airport soil stabilization unit prices. p65 ... Feb 4
Bentonite slurry stabilizes trench, keeps groundwater out,**. p42 ... Feb 11
Computer, radios speed soil survey off Rhode Island, map. p73 ... Feb 18
Chemicals stop water seepage through soil. NP p49 ... Mar 10
Soil heave and pyrites. RCs p6 ... Mar 31
Nuclear gage measures soil moisture and density,*. NP p72 ... May 12
Notable foundations that set precedents,*, diags. p43 ... May 19
Sound waves map Michigan soils, diags. p69 ... May 19
Baby seismograph saves drilling,*. NP p89 ... May 19
Material spreader for soil stabilization. NP p104 ... May 19
Foundations are more art than science; Moran, Proctor and partners' 50th birthday,**. p110 ... May 19
California is presettling canal right of way by flooding,*. p37 ... Jun 30

SONIC BOOM see: ACCIDENTS; AIRCRAFT; DESIGN

STANDARDS AND SPECIFICATIONS see also: BUILDING CODES; DESIGN
Building Research Institute asks for more rigorous uniform standards. p28 ... Apr 14
What price loose specs? e p162 ... Apr 14
Contracts and specs—urgent concern to plumbers. RC p10 ... May 19
Data on Spec writing. RC p12 ... Jun 16
AISC rules for platic design of steel. e p288 ... Jun 23

STATE LEGISLATION AND FINANCES see also: TAXES
NY court rules that an authority is not an arm of the state. p24 ... Jan 14
Industrial Development Finance Authority upsets Kentucky's bldg loans. p108 ... Jan 14
State legislatures wrestling with annual budgets. p86 ... Feb 11
N. J. state court rules against Levittown discrimination. p150 ... Feb 18
Battle in Boston: state contracts flow to out of state firms. CW p17 ... Jun 2

STEEL
What price settlement? R. M. Blough's statements. p61 ... Jan 7
Prices will go up—when and how much? p24 ... Jan 14
Long range effects of steel strike, labor-management responsibility. p110 ... Jan 14
The steel settlement. e p122 ... Jan 14
Did bridge contest help steel? RC p12 ... Jan 21
Bids for Morocco's first steel mill. p52 ... Jan 21
Nickel in steel ads ductility. RC p6 ... Feb 18
How to use high strength steel effectively,*, diags, table. p52 ... Feb 18
Ways to steel progress. e p164 ... Feb 18
New techniques with steel. e p126 ... Feb 25
Savings in designing steel for continuity. RC p11 ... Mar 3
Foreign steel cinches Panama Canal Bridge contract. p22 and e p84 ... Mar 10
Labor and management accused in union shop issue. p73 ... Mar 17
Kaiser group makes progress in collective bargaining issue. p102 ... Mar 17
Warehouses cut prices on structurals. p320 ... Mar 24
New steel spec coming. CW p17 ... Apr 28
Old deck re-used on new bridge in N. Y.,*, diag. p53 ... Apr 28
Japanese steel for Mississippi bridge. CW p17 ... May 12
Stronger structural steel coming, AISC conference told, table. p24 ... May 12
Cheerful news on steel. e p198 ... May 19
Plastic design cuts frame cost for Nashville plant,*, diag. p50 ... May 26
High strength reinforcing steel bars. CW p17 ... Jun 2
Structural steel will be exposed and unpainted in Illinois bldg. CW p17 ... Jun 2
Anchors hold down Florida tunnel sealed in steel,**, diags. p28 ... Jun 9
Color coating will not fade, chalk or peel. NP p57 ... Jun 9
New steel is not new. RC p9 ... Jun 16
High strength steel frame for Portland, Ore, office bldg,*, diag. p24 ... Jun 16
Plastic design in steel framing approved. p134 ... Jun 23
New tools and mental inertia: AISC rules for plastic design. e p288 ... Jun 23
Tough job for steel erectors at Indian Point A-plant,**. p22 ... Jun 30

SUBWAYS see: CITIES; RAILROADS; TRANSPORTATION

SURVEYING, MAPPING, DRAWING
Small relief maps in plastic,*. NP p40 ... Jan 7
Bruning adds a line of surveying instruments. NP p61 ... Jan 14
Training program for Calif surveyors. p191 ... Jan 28
Lake Superior bottom chartered in 3 year survey. p48 ... Feb 4
Survey school for field men. p46 ... Mar 24
Tellulometer instruments now have dual functions,*. NP p174 ... Mar 24
Corps of Engineers plans for mapping the moon,*. p29 ... May 19
Sound waves map Michigan soils, diags. p69 ... May 19
UTM grid coordinates New York highway condition maps. p124 ... Jun 23

T

TAXATION
More liberal depreciation allowances expected. WO p19 ... Jan 21
Court against multiple corporations income tax devices. p78 ... Feb 4
New depreciation rules in sight. p69 ... Mar 10
Tax relief for New York City builders expected. p25 ... Mar 17
Keogh bill delayed. WO p59 ... Mar 24
Tax relief on Boston's Prudential Center may be challenged,*. p316 ... Mar 24
Special tax rates: tricky redevelopment tool. p317 ... Mar 24
Revenue Service interprets deductibility of workers' traveling expenses. WO p23 ... May 19
Labor industry protests federal income tax ruling. p274 ... Jun 23
States get record hwy user taxes. p270 ... Jun 23
Depreciation allowances can't go too far; clay pipe makers take a rap from Supreme Court. WO p15 ... Jun 30

TELEPHONE see: UTILITIES

TELEVISION see also: BUILDINGS, Towers
Closed circuit TV to monitor apartment-house elevator entrance. CW p17 ... Mar 17
TV and telephones for sidewalk superintendents,*. p23 ... Jun 16

TENNESSEE VALLEY AUTHORITY
Sees growth ahead. WO p15 ... Jan 7
Paradise, Ky, is out of bounds for TVA, site owners say. p29 ... Jan 14

TOLLS see: BRIDGES; HIGHWAY DESIGN; HIGHWAYS

TRAFFIC, TRANSPORTATION see also: HAULING; HIGHWAYS; RAILROADS
Highway research and the city,*. p23 ... Jan 21
Will rapid transit vehicles be allowed on Golden Gate Bridge? p26 ... Jan 21
To limit travel in peacetime would be folly. e p100 ... Jan 21
Philadelphia's rail plan could set urban pattern. p48 ... Jan 28
Annual review, major projects,**; dominant issue: urban transportation. p126 ... Jan 28
For mass transportation. RC p12 ... Feb 4
Mass transit system for Los Angeles is feasible. p24 ... Feb 11
Britain's Motopia carries all traffic on roofs,*. p26 ... Feb 11
South Jersey transit line gets consultants' backing. p151 ... Feb 18
NYC's subway jobs unit prices. p60 ... Mar 10
Transportation study is filed. WO p19 ... Mar 17
Chicago considers parking garages connected to rapid transit. p28 ... Mar 17
Planning, management, costs of hwys and tolls. RCs p32 ... Mar 24
Foresight in traffic planning: will Brasilia have no problems? e p100 ... Mar 31
Is help coming for urban mass transit? WO p19 ... Apr 21
Hwys alone won't do. RC p10 ... May 19

(Continued)

(Continued)

World Bank loans help Belgian Congo transport. p80 ... May 19
Transportation, shopping centers, downtown areas. RC p6 ... Jun 9
Rapid transit for Atlanta planned. CW p15 ... Jun 9
Rail transit comeback. e p110 ... Jun 9
San Francisco area transit plan not ready for vote yet. p24 ... Jun 16
Rapid transit on Golden Gate Bridge is feasible. CW p37 ... Jun 23
Rapid transit for Los Angeles. CW p13 ... Jun 30

TRAILERS see: EQUIPMENT; HAULING

TRUCKS see: EQUIPMENT, Trucks; EARTHMOVING; HAULING

TRUSSES see: BEAMS, GIRDERS, TRUSSES

TUNNELS
Annual review, major products,**. p126 ... Jan 28
Another record in Australian Snowy Mountains. p32 ... Feb 11

• American
West Delaware, NYC's water tunnel, final holing. CW p17 ... Jan 14
West Delaware Tunnel is major link in NYC's water system,*, map. p21 and e p122 ... Jan 14
Seismology probes bay bottom for a San Francisco rapid transit tunnel,*. p26 ... Jan 14
Old water tunnel in Baltimore will have new job, map. p32 ... Mar 17
and RC p13 ... May 19
Bids to open for Spring Creek water tunnel, Calif. p70 ... Mar 24
Virginia flood control tunnel unit prices. p128 ... Mar 24
Indianapolis sewer tunnel gas explosion takes 22 lives. p26 ... Mar 31
Work starts on second Portsmouth-Norfolk tunnel, Va. p24 ... Apr 7
Los Angeles bldg tunnel unit prices. p80 ... Apr 7
Chicago contractor builds low cost tunneler for boring a sewer,*, diag. p42 ... Apr 28
Colorado twin hwy tunnels unit prices. p63 ... Apr 28
Bond issue set for Norfolk bridge-tunnel Chesapeake Bay crossing. p80 ... Jun 2
Anchors hold down Ft. Lauderdale, Fla, tunnel sealed in steel,**, diags. p28 ... Jun 9
Elizabeth River Tunnel, Va., unit prices. p86 ... Jun 23

• Foreign
Snowy Mountain hydro project, Australia: new tunneling record. p32 ... Feb 11
Mechanical mole drives Toronto sewer tunnel,*. p30 ... Feb 18
Bhakra Dam tunnel, India, is almost shut off,**, diag, graph. p50 ... Feb 25
Toronto's cover-then-cut subway,** tunneling procedure. p37 ... Mar 3
London subway experiments with dry run tunneling. p49 ... Mar 17
Mexico City drainage tunnel races the rainy season. p154 ... Mar 24
Two tubes for rail traffic only proposed under the English Channel. p25 ... Mar 24
Tunnel accidents take lives in Toronto and in Japan. p26 ... Mar 31
Access to Dez Dam, Iran, is mostly tunnels,*. p34 ... Apr 7
Three tunnels and a bridge backed for English Channel. p30 ... Apr 14
Second Blackwell tube under the Thames starts in London. p56 ... Apr 21
English Channel study report for bored railway tunnels. p24 ... Apr 28
Obstacles slow Mont Blanc job; American and Swedish methods compared,**. p45 ... Apr 28
Dusseldorf Tunnel planned on the Rhine River,**, diag. p110 ... Jun 23
Drain tunnel for Mexico City's Lake Tequesquitengo,*. p112 ... Jun 23
Orly superhighway, France, features tunnel,**, map. p104 ... Jun 23

U

UNIT PRICES see: CONSTRUCTION, Unit Prices

URBAN RENEWAL see: CITIES

U. S. see: AIR FORCE; CONGRESS; CORPS OF ENGINEERS; NAVY

UTILITIES see also: POWER
Electric utilities industry expenditures to hit record. p87 ... Feb 11
Indictments hit electrical firms. p114 ... Feb 25

V

VALVES
Stainless steel bleeder valves have visual check,*. NP p55 ... Jun 2
Plug valve turns easily, is maintenance free,*. NP p53 ... Jun 16
Steel gate valves have flexible wedge disk. NP p45 ... Jun 30

VEHICLES see: EQUIPMENT, Trucks; TRAFFIC, TRANSPORTATION

VENTILATION see: AIR CONDITIONING, HEATING, VENTILATION

VIADUCTS see: BRIDGES

VIBRATORS see: CONCRETE, Mixing and Placing; EQUIPMENT

W

WALLS
Movable partitions of insulated panels give more design flexibility. NP p48 ... Feb 11
New dry wall method cuts time and costs,**, diag. p167 ... Mar 24
Hyperbolic-paraboloid panels make a striking economical exterior for Detroit garage,**. p46 ... Mar 31
Cement Enamel is vitreous wall surfacing. RC p35 ... Jun 23

WATER POLLUTION see also: RIVERS; SEWAGE
Annual review: clean up or make do with dirty water,**. p94 ... Jan 28
Pollution wardens in each plant demanded by Ohio Water Sanitation Commission. CW p17 ... Feb 4
F. H. Waring, old time sanitary engineer, knows how to stop pollution,*. p55 ... Mar 3
Pollution problems are getting much worse. WO p19 ... Mar 10
Maryland builds biggest activated sludge plant to treat pulp mill wastes,*. p28 ... Mar 10
Plan to enclose and chlorinate NYC's East River beaches. CW p17 ... Mar 17
Industrial waste control in NYC may become stiffer. p25 ... May 12
Three Chicago companies must dredge Calumet River which they clogged. CW p21 ... May 19
ORSANCO looks at acid mine drainage,*. p61 ... May 19
Fish used in Pennsylvania lab tests to detect polluted water. p122 ... Jun 23
National Conference on water pollution to be held in Washington in December. p24 ... Jun 30

WATER RESOURCES see also: IRRIGATION; POWER; RESERVOIRS; RIVERS; TUNNELS
Ackerman says California water plan is unfeasible. p27 ... Jan 21
California water plan critics get answer. p47 ... Jan 28
Annual review: clean up or make do with dirty water,**. p94 ... Jan 28
Lump-sum requests for water jobs planned in Congress. WO p19 ... Feb 4
Consultants will review Feather River project. p26 ... Feb 4
Find a way for California's ambitous water plans. e p100 ... Feb 11
C. F. Wertz slated to head AWWA,*. p94 ... Feb 18
Texas water program falters. p138 ... Apr 21
Colorado River water diversion. p27 ... May 12
Hong Kong to buy water from Red China,*, map. p49 ... May 19
A new course for the Colorado, maps. p25 ... May 19
Sink the Red Sea to obtain power. CW p17 ... May 26
Experts see heavy spending ahead for water. p24 ... May 26
Congress approves San Luis project, Calif. p28 ... May 26
Los Angeles maneuvers to avoid water shortage. p26 ... Jun 16
Oregon dunes yield fresh water. p132 ... Jun 23
Kerr water resources committee findings will be delayed. WO p39 ... Jun 23
Final stage of NYC's Delaware water supply: bids on Cannonsville dam. p24 ... Jun 30

• Aqueducts
Feather River project financially unfeasible. p27 ... Jan 21
California completes Colorado River aqueduct. p27 ... May 12
Arizona aqueducts, map. p25 ... May 19

• Treatment
Water purification unit can be dropped by air. p56 ... Jan 21
South Dakota, New Mexico to get desalting plans. p25 ... Feb 11
Blaw-Knox to build pilot desalter. CW p17 ... Mar 3
Government's fifth desalting plant will be located on East Coast. p23 ... Mar 10
Ohio water treatment plant unit prices. p132 ... Mar 24
Cuba builds water treatment plant in Oriente Province,*. p55 ... Apr 21
Money for desalting plants: $30m or $3m? CW p21 ... May 19
Third freezing process for sea water conversion. CW p17 ... Jun 2
Point Loma desalter cooks with gas. CW p15 ... Jun 9
Oxnard, Calif desalter called largest and cheapest. p21 ... Jun 9
Webster, S. D., water conversion plant, diag; Interior's five demonstrators. p41 ... Jun 9
Chicago Bridge & Iron wins Texas desalter contract. p26 ... Jun 16
No breakthrough yet in desalting. e p96 ... Jun 16
More money for desalting. CW p13 ... Jun 30

• Waterworks, water mains see also: PIPES
*Torresdale filtration plant, Philadelphia. p96 ... Jan 28
*Chicago filter plant. p102 ... Jan 28
Denver lifts limit for water-line extensions. CW p17 ... Feb 4
First water system in Asuncion, Paraguay,*. p60 ... Feb 25
New job for old Baltimore water tunnel, map. p32 ... Mar 17
South Carolina water works plant improvements unit prices. p63 ... Mar 17
Four pipe alternates priced for Wash. water transmission line; unit prices. p111 ... Apr 14
Automatic filtration plant for San Jose, California,**. p32 ... May 12
Miami's water system under C. F. Wertz,*. p75 ... May 12
Ultrasonic wave deflection used in flowmeter,*. NP p89 ... May 19
A waterworks record for 1960 is expected, graph. p24 ... May 26

WELDING
Poor weld caused collapse of Los Angeles girder,*. p30 ... Feb 18
Steel sulku seat is a welcome throne for welders,*. NP p81 ... Apr 14
Plastic welder features new heating element. NP p92 ... Apr 14
Houston bank is tallest all welded steel framed bldg. p24 ... Apr 28
Welding unit resurfaces tracks, rails and edges. NP p56 ... Apr 28

WHARFS see: PORTS AND HARBORS

WOOD see: LUMBER

WORLD BANK
Loans help Belgian Congo transport. p80 ... May 19
Sudan seeks loan for water and power project. p82 ... May 19

Z

ZONING see also: CITIES
S. Rosenblum calls NYC proposed zoning a monstrosity. CW p13 ... Jan 7
Zoning—a city's future. e p122 ... Jan 14
High court may get zoning dispute. p78 ... Jan 21
Prosperity via zoning. e p116 ... Apr 7

AUTHORS, PERSONALITIES

AARON, HENRY
Stronger reinforced concrete pavements,**. p44 ... May 12
ABDUN-NUR, E. A.
Bridging gap between design and construction. RC p32 ... Jan 28
ADAMS, ROBERT R.
Roof costs. RC p7 ... Feb 11
ALLEN, A. K.
Becomes vice president, Blount Bros Co, Atlanta, Ga.**. p74 ... May 26
ANDERSON, ARTHUR R.
Washington precast prestressed stadium floats on hypercolic paraboloids,**. p62 ... Feb 18
ANDREW, CHARLES E.
Bridge designer resigns from Washington Toll Bridge Authority. p62 ... Jun 2
BALL, HENRY F.
Consultants vs. government engineers. RC p18 ... Mar 24
BARRENA, AGUSTIN
Vega de Tera Dam engineers accused falsely. RC p32 ... Jun 23
BARROWS, W. R.
Chief hydraulic engineer at Gibbs & Hill. p66 ... Apr 7
BATES, HARRY CLAY
Veteran labor leader retires from Bricklayers International,*. p186 ... May 19
BEESING, ALLAN M.
No mystery in beam design. RC p8 ... Feb 4
BENLINE, ARTHUR J.
To head N.Y. air pollution control. p66 ... Apr 7
BIRCHARD, RALPH
Lump sum contracts. RC p12 ... May 5
BIRD, ARTHUR D.
Becomes Cincinnati's city engineer. p45 ... Jan 7
BLATNIK, JOHN A.
Asks interstate hwy questions in Congress,*. p22 ... Feb 11
BOGERT, CLINTON L.
ENR should not waste space on computer reports. RC p8 ... May 26
BONNER, JOHN F.
Becomes vice president of Pacific Gas & Electric Co, San Francisco,*. p57 ... Feb 4
BRAGDON, GENERAL JOHN S.
White House job ends. p32 ... May 5
BOSCHEN, HENRY C.
Becomes president of Raymond International,*. p72 ... May 26
Raymond has a new president and a new stock exchange listing,*. p44 ... Jun 16
BRANNAN, ROBERT W.
In defense of government engineers. RC p8 ... Jan 28
BRILL, CLINTON
Resigns from NY Thruway post. p70 ... Feb 25
BRITZIUS, C. W.
Consulting by engineering professors. RC p8 ... Jan 14
BROMBERG, IRWIN
How to measure labor productivity. p110 ... Mar 24
BROWNELL, C. D. Jr.
Contracts and specs — urgent concern to plumbers. RC p10 ... May 19
BUHR, VICTOR W.
Consultants vs government engineers. RC p10 ... Mar 24
BURDELL, EDWIN S.

Takes UNESCO mission at Middle East Technical University,*. p58 ... Mar 10
BURTON, C. TAYLOR
To head Utah road commission. p56 ... Feb 11
BUSCH, WILLIAM A.
Roof cost figures challenged. RC p7 ... Feb 11
CAMBELL, CHESTER W.
Becomes president of the Moles,*. p59 ... Jun 9
CAMMERO, NICHOLAS D.
Newburgh bridge designed for future expansion. RC p6 ... Jun 2
CARSON, ROBERT
NYC's office bldg designer dies at 53,*. p217 ... Mar 24
CASS, JAMES R. Jr.
Computer, radios speed soil survey, map. p73 ... Feb 18
CATTANEO, ANTONIO MARTINEZ
On the Vega de Tera Dam incident. RC p32 ... Jun 23
CHANDLEE, J. R. Jr.
Slip form savings. RC p10 ... Mar 10
COCROFT, R. R. Jr.
In defense of government engineers. RC p8 ... Jan 28
COYNE, ANDRE
French dam constructor honored by Britain. CW p37 ... Jan 28
CRANDALL, HORACE C.
For construction consultants. RC p8 ... Apr 21
CREEDON, FRANK R.
Becomes vice-president at M-C & S,*. p62 ... Jun 2
CRON, ROBERT E. Jr.
In defense of government engineers. RC p8 ... Jan 28
DALY, JOHN
Becomes member of Water Pollution Control Advisory Board. CW p17 ... Feb 4
DAVIDSON, J. W.
Missiles on railroads: no interstate hwy bridge clearances. RC p12 ... Mar 31
DELANO, WILLIAM
Architect, noted for public bldgs, dies at 86. p61 ... Feb 4
DENNIS, JAMES H.
Mammoth Pool reservoir capacity questioned. RC p12 ... May 5
DITMARS, DONALD M.
Unclogging sewage dispersal pipes in NYC,*, diag. p32 ... Jan 21
DOLECKI, STANLEY
Public education needed to produce good codes. RC p8 ... May 5
DOOLY, WILLIAM G.
On "Owner's Choice", AGC vs. NPAC. RC p9 ... Jun 23
DUNLAP, WILLIAM E.
Developing the space-truss roof design, diag. p56 ... May 19
EDWARDS, ROBERT C.
In defense of teacher-consultants. RC p6 ... Feb 18
ELLIOTT, A. L.
How to use high strength steel effectively,*, diags. p52 ... Feb 18
ELMER, WILLIAM W. Jr.
Higher pay for U.S. engineers. RC p12 ... Feb 18
ENGLISH, J. M.
ENR's computer report well done. RC p8 ... May 26
FAIRMAN, JAMES F.
Named to receive NSPE award,*. p61 ... Apr 28
FERRIS, GEORGE F.
President becomes board chairman at Raymond International,*. p72 ... May 26
FINE, DAVID S.
Retires from American Bridge after 44 yrs,*. p72 ... May 26
FITZSUMONS, NEAL
Effectiveness of fallout shelters varies with the cost. p32 ... Jun 2
FLORIS, A.
Amends impact formulas on loads in hellstop design. RC p8 ... Feb 25
FOX, KENDALL C.
In defense of government engineers. RC p8 ... Jan 28
FRY, Z. B.
Blasted runway defended. RC p9 ... Jun 30
GAY, LINTON E. Jr.
Let's help with the solution rather than be part of the problem. RC p29 ... Mar 24
GERKE, RICHARD C.
Congratulations on ENR's report on computers. RC p11 ... May 26
GIBSON, THOMAS
Consultants are cheaper than government engineers. RC p18 ... Mar 24
GNAEDINGER, JOHN P.
Soil heave and pyrites. RC p6 ... Mar 31
GRAY, J. ASHTON
Prestressing inspection. RC p37 ... Mar 24
GRAY, RICHARD J.
Ends long union career,*. p90 ... Feb 11
HADLEY, HOMER M.
Make bridge design competitive. RC p8 ... Apr 21
Shear transfer can be simple,*. p45 ... May 26
HAGGERTY, CORNELIUS J.
New chief of Building and Construction Trades Dept, AFL-CIO*. p22 ... Mar 3
HARDER, E. F.
Labs, testing and inspecting services. RC p10 ... Jun 9
HERBRUCK, CHARLES G.
Bridge design contest. RC p6 ... Mar 10
HERRING, DAVID M.
Pouring concrete onto metal lath. RC p8 ... Feb 4
HERSHLEDER, WILLIAM
Concrete shielding dome for Indian Point A-power plant,*, diag. p43 ... Mar 17
HNOT, WALTER R.
Did bridge contest help steel? RC p12 ... Jan 21
HODSON, HARRY
Consultants cost less. RC p8 ... Mar 17
HOLCOMB, GLENN W.
Nominated for '61 ASCE president. p24 ... Jun 30
HOLDEN, CHARLES
London architect dies at 84. p62 ... Jun 9
HOLUM, ANDREW R.
Credit to KA-MO Tools in preboring. RC p9 ... Jun 23
HOOPER, IRA
Record for composite design construction,*, diags, tables. p84 ... Mar 24
HOTCHKISS, JOHN G.
Record for composite design construction,*. drags, table. p84 ... Mar 24
HUBER, WALTER L.
Noted consulting engineer dies. p27 ... Jun 9
HULL, NOAH E.
Slated for NSPE presidency. p57 ... Feb 4
HUTTON, ROBERT D.
New partner in Modjeski & Masters p163 ... Jun 23
INGERSOLL, ALFRED C.
Becomes dean of school of engineering, University of Southern California. p65 ... May 5
ITSCHNER, LT. GEN. EMERSON C.
Tour with Corps of Engineers is extended two years,*. p29 ... May 19
JACOBS, DANIEL
In defense of government engineers. RC p8 ... Jan 28
JACOBS, ROBERT M.
Mix for Brookhaven synchrotron. RC p11 ... Mar 3
JOHNSON, ALGOT F.
Receives Beavers award,*. p65 ... Jan 21
KAHN, HARRY J.
Aluminum bridge weighs only half as much. RC p12 ... Feb 18
KALVE, ERNEST
Progress passes pioneers: civil engineer's job. RCs p8 ... Apr 7
Engineers must keep up with research. RC p8 ... Jun 2
KAMMAN, ALAN B.
Philadelphia engineers tour Europe. RC p7 ... Feb 11
KARRER, EMMETT H.
Now professor at Ohio State,*. p158 ... Jun 23
KAUFMAN, ROBERT I.
Corps' Tests on two new locks may achieve future economics,*, diag. p38 ... May 19
KEALEY, T. ROBERT
New partner in Modjeski & Masters.p163 ... Jun 23
KEHOE, JAMES L.
American construction men in Moscow in the 1930's. RC p12 ... Feb 25
KELLY, JOE W.
Becomes president of American Concrete Institute,*. p58 ... Mar 31
KESINGER, JOHN W.
Civil engineer serves Los Angeles bank as advisor on construction loans,*. p112 ... Feb 25
KINZEL, AUGUSTUS B.
EJC president becomes chairman of engineering in National Research Council. p57 ... Feb 4
KLINGER, W. A.
AGC and education. RC p12 ... Jan 21
KOHLER, CHARLES M. J. W.
Progress passes pioneers: on civil engineering. RC p8 ... Apr 7
KOMINEK, HENRY V.
Big future for cold twisted bars in reinforced concrete construction. RC p10 ... Apr 14
KONDO, WALTER H.
Hwys alone won't do, railroads are necessary too. RC p10 ... May 19
KROLL, STANLEY A.
Toll charges and hwy signs,*. RC p8 ... Jan 21
KULAS, FRANK E.
On Consulting Engineers Council. RC p10 ... Apr 14
LANG, A. S.
Hwy costs, planning and management. p32 ... Mar 24
LAW, EDWIN B.
Consultants for construction. RC p6 ... Jan 7
LeMESSURIER, WILLIAM J.
Architects for Northeast Airlines hangar. RC p12 ... Feb 11
LORENZEN, ROBERT T.
In defense of teacher-consultants. RC p6 ... Feb 18
MANN, GEORGE
Case Institute of Technology got Ford grant. RC p8 ... Jan 21
MANNING, JOHN J.
Advice on concrete inspection. RC p25 ... Jun 23
MARCELLO, J.J.
Slip forms on paving jobs. RC p14 ... Apr 14
MASON, NORMAN P.
Receives BRI award,*. p97 ... Apr 14
MASTERS, FRANK M.
New steel is not new. RC p9 ... Jun 16
MAYER, HERBERT
Becomes president of the Associated Equipment Distributors. p65 ... Apr 7
MAYIS, F. T.
High strength bar test. RC p8 ... Apr 7
McCREARY, B. D.
Consultants cost less. RC p8 ... Mar 17
McMILLAN, F. R.
Toll system should penalize lonely drivers. RC p14 ... Mar 10
MEIER, FRANK
Inadequate bridge or hwy planning. RC p10 ... Jun 2
MERRITT, FREDERICK S.
What you should know about computers,*, diags. p39 ... Apr 14
METTI, MUJIB
Stop lynching raids among engineers. RC p15 ... Mar 24
MEYER, ROBERT
In defense of government engineers. RC p22 ... Jan 28
MINTON, MAJ. GEN. AUGUSTUS M.
President of SAME is the builder for the Air Force,*. p66 ... May 26
MOORE, W. L.
Lower vehicles instead of raising bridges on interstate. RC p12 ... Feb 25
MORGEN, RALPH A.
Directs Rose Polytechnic Institute. p65 ... Jan 21
MORRIS, GILBERT E.
Los Angeles slum clearer retires this month. p59 ... Jun 9
MOUNCE, W. S.
In arctic: nickel adds ductility. RC p6 ... Feb 18
NEWCOMB, ROBINSON
Factors in housing markets. RC p9 ... Jun 30
NEWLIN, C. H.
Who needs expressways. RC p6 ... Jun 9
NORDBY, GENE M.
More scholarships for engineers. RC p8 ... Apr 28
OLDS, IRVING S.
Retires as US Steel director,*. p205 ... Mar 24
OMAN, JOHN III
Nashville, Tenn. construction man dies in plane crash. p58 ... Mar 31
OSTROWER, DONALD A.
In defense of government engineers. RC p16 ... Jan 28
PALMER, ROBERT A.
Ingenious barriers on hwys. RC p8 ... Mar 3
PAHNORST, FREDERICK W.
California bridge expert retires,*. p207 ... Mar 24
PAYNE, SETH
Highway hearings end round one,**. p21 ... May 12
PEARSON, EDWARD R.
ENR report on computer is a good job. RC p8 ... May 26
PETERSON, E. R.
Correction of Mammoth Pool reservoir capacity. RC p12 ... May 5
PETTY, BENJAMIN H.
Retired Purdue professor dies. p61 ... Feb 4
POLIVKA, JAROSLAV JOSEPH
Noted designer, teacher, dies at 73. p71 ... Apr 7
PRICE, GWILYM A.
Westinghouse chairman receives John Fritz gold medal. p64 ... Jan 14
PROCTOR, CARLTON S.
Foundations that set precedents,*, diags. p43 ... May 19
PUTNAM, MRS. C. A.
Against spiral-ramped electronic supermarket. RC p12 ... Feb 11
RAND, JOHN R.
Hwy cost, management, planning. RC p32 ... Mar 24
REITZ, HENRY M.
Soil heave and pyrites. RC p6 ... Mar 31
RIGHTS, T. B.
Where to place girts? RC p14 ... Mar 10
RILEY, JOHN P.
Becomes vice-president of Lockwood, Kessler & Bartlett,*. p93 ... Feb 18
RITTER, LEO J. Jr.
Big power for pushing scrapers, tables, graphs,*. p30 ... Apr 28
ROSE, WILLIAM A.
Becomes general manager and executive vice president of Perini Corp,*. p59 ... Jun 9
ROSENFELD, ARNOLD A.
Automatic snow removal. RC p10 ... Jun 2
ROWE, ARTHUR E.
Sonic boom questions. RC p6 ... Jan 7
ROWE, ROBERT S.
Leaves Duke to be dean of Vanderbilt. p93 ... Feb 18
ROYER, KING
Architects' and engineers' registration differences. RC p12 ... Feb 18
RUDDY, JOHN M.
Who is responsible for what in building nuclear facilities. p44 ... Jun 2
RYAN, WILLIAM F.
Architects and engineers. RC p8 ... Jan 14
RYDER, ELY M. T.
Joints are a nuisance. RC p12 ... Jun 16
SALLACK, MYLES J.
Pusher-scraper picture captions reversed. RC p35 ... Jun 23
SALVADORI, MARIO G.
On Eduardo Torroja and the Vega de Tera Dam. RC p35 ... Jun 23
SARKARIA, G. S.
Why don't US dambuilders build buttress type dams,**, diags, table. p30 ... Mar 31
Dam design competition rued. RC p11 ... May 12
SAVAGE, C. F.
ENR's report on computers is a good job. RC p8 ... May 26
SAXE, VAN RENSSELAER P.
Savings in continual design of steel. RC p11 ... Mar 3
SCHILLING, CHARLES H.
Congratulations on ENR's report on computers. RC p11 ... May 26
SCHUPACK, M.
Lack of field data on concrete. RC p8 ... Mar 3
SCHWESER, G. G.
Consultants for construction. RC p6 ... Jan 7
SCOTT, WALTER
Receives Beavers award,*. p65 ... Jan 21
SEELYE, ELWYN
Noted structural engineer dies,*. p23 ... Jan 7
SERRE, SHERMAN H.
Becomes senior vice-president, M-C & S,*. p62 ... Jun 2
SHACKLETTE, BARON I.
Investigates hwy jobs. CW p17 ... Apr 7
SHEETS, WILLIAM L.
Becomes construction manager at Stone & Webster,*. p112 ... May 19
SMILLIE, RALPH
Leading tunnel designer dies at 72. p32 ... Feb 25
SMITH, HERBERT E.
Retires as director of US Steel,*. p205 ... Mar 24
SMITH, KIRBY
Architects and engineers. RC p8 ... Jan 14
SMITH, VERNON H.
Composite design in steel and concrete, RC p6 ... Mar 10
SPAETH, G. L.
Formula for proper blasthole spacing, diag, table. p53 ... Apr 7
SPIVAK, ALVIN L.
Hwy users must pay for hwys. RC p8 ... Feb 25
SPRAGUE, JOHN C.
Consultants for construction. RC p6 ... Jan 7

(Continued)

(Continued)

STEINMAN, D. B.
Raises three to partnership. p63 ..... Jan 14
STEVENSON, ALBERT
New York civil engineer dies at 70. p62 ..... Jun 9
STINSON, ROBERT J.
How and why Fruin-Colnon runs an annual management meeting,*. p146 ..... Feb 18
SULLIVAN, JAMES B.
A new course for the Colorado, maps. p25 ..... May 19
SWERDLOW, ALBERT
On Cement Enamel. RC p35 ..... Jun 23
SZMAK, G.
On the contractors' job. RC p25 ..... Jun 23
TARNOPOLL, L.
For mass transportation. RC p12 ..... Feb 4
TATLOW, RICHARD H
Becomes president of Consultant's Institute. p66 .. Apr 7
TEARE, B. R.
*Presents honorary ASEE membership. p20 ..... Jun 30
TEER, NELLO L. Jr.
Re-elected ARBA's president. p42 ..... Jan 28
Warns of threat to interstate program. p32 ..... Feb 11
THOMPSON, JAMES S.
*Receives honorary ASEE membership. p20 ..... Jun 30
THORNLEY, J. H.
Drilled in caissons become legs for NYC skyscraper,**, diag. p34 ..... Jun 16
TRENHOLME, L. B.
On ENR's report on computers. RC p8 ..... May 26
TRINIDAD, A. A. Jr.
Two designs for aluminum bridges,**. p38 ..... Jan 21
UHR, SAUL
In defense of government engineers. RC p32 ..... Jan 28
URQUHART, LEONARD CHURCH
Civil engineer, designer dies at 73. p27 ..... Mar 10
VALLERGA, B. A.
Becomes director of products engineering, Golden Bear Oil Co, Los Angeles,*. p65 ..... Apr 7
VAN DER ROHE, LUDWIG MIES
Will receive AIA gold medal. p58 ..... Mar 10
VAN GEEM, EARL T.
Named director of engineering at J. H. Pomeroy & Co. p164 ..... Jun 23
VAN WILSON, H.
Why higher bridges for missile transportation? RC p13 ..... Jan 14
VIGNONE, ETTORE
Data on spec writing. RC p12 ..... Jun 16
VOLPE, JOHN A.
AGC president seeks nomination for Governor of Massachusetts. CW p17 ..... Feb 4
A man with a plan,*. p57 ..... Mar 31
Has a good chance to become Governor of Massachusetts. CW p17 ..... Jun 16
WADLEIGH, GEORGE R.
Prestressing inspection. RC p37 ..... Mar 24
WALSH, FRED W.
For construction consultants. RC p8 ..... Apr 21
WARD, GERALD C.
Full scale steel bridge tests at Northwestern University,*. p75 ..... Feb 18
WARING, FRED H.
Old school sanitary engineer knows how to stop water pollution,*. p55 ..... Mar 3
WEBBER, JAMES
Public works gets set to sprint, graphs, tables. p21 Apr 7
WERTZ, C. F.
Slated to head AWWA,*. p94 ..... Feb 18
Rules Miami's water system, making money,*. p75 .. May 12
WHITE, ROBERT E.
There is nothing new in construction since the Pyramids. RC p8 ..... Jan 21
WHITE, WILLIAM A.
Survey school for field men. RC p46 ..... Mar 24
WIGGING, THOMAS H.
Consultants vs. government engineers. RC p15 ..... Mar 24
WILKINSON, JOSEPH F.
Raymond International has new president and new stock exchange listing,*. p44 ..... Jun 16
WILLIAMS, NED E.
In defense of government engineers. RC p32 ..... Jan 28
WOLFF, JEROME B.
Baltimore County, not City, saves $1m on water tunnel. RC p13 ..... May 19
ZWEIG, ALFRED
Beauty and economy for Ford Hospital garage in Detroit,**. p46 ..... Mar 31

COMPANIES

ACKER DRILL CO, SCRANTON, PA
Core drill has air brakes,*. NP p69 ..... Feb 25
ADAMS (CHARLES M.) HUNTINGTON, W.VA
Wheel type calculator figures piping man-hours. NP p57 ..... Jun 9
AERO SERVICE CORP, PHILADELPHIA, PA
Small relief maps in plastic,*. NP p40 ..... Jan 7
ALLIS CHALMERS MFG CO, MILWAUKEE, WIS
Ease of handling claimed for motor scraper,*. NP p56 ..... Jan 14
Rotary mowers for hwys and airports,*. NP p55 ..... Mar 17
Easy to handle motor scraper. NP p73 ..... Apr 21
Loader has four wheel drive,*. NP p92 ..... May 19
All-hydraulic rear dump wagon carries 12 tons. NP p102 ..... May 19
Crusher side setting may be read externally. NP p54 Jun 16
ARPS (THE) CORP, NEW HOLSTEIN, WIS
Self propelled trencher operated by one man. NP p55 Mar 17
ARROW MFG CO, DENVER, COLO
Multiple hammer has many uses,*. NP p81 ..... Apr 14
ATLANTIC GULF AND PACIFIC CO, MANILA, PHILIPPINES
Construction firm grows with island economy. p56 Apr 21
ATLAS INDUSTRIAL CORP, BROOKLYN, N.Y.
Scaffold system fits inside spherical tank. NP p53 Feb 4
AUTOMATIC WELDING CO, WAUKESHA, WIS
Welding unit resurfaces tracks, rails and edges. NP p56 ..... Apr 28
BARBER GREENE CO, AURORA, ILL
High speed vertical boom ditcher,*. NP p86 ..... Feb 18
New feeder bins in small units,*. NP p140 ..... Jun 23
B-I-F INDUSTRIES INC, PROVIDENCE, R.I.
Integrator gives reading for dry flow meters. NP p49 Mar 10
Diaphragm pump measures corrosive chemicals. NP p50 ..... Mar 10
BINGHAMTON METAL FORMS, NEW YORK, N.Y.
Flexible steel forms concrete forms are pre-set for curvature. NP p72 ..... May 12
BLACK BROTHERS CO, MENDOTA, ILL
Chain clamp fastens rubber sleeve to pipe,*. NP p145 ..... Jun 23
BLAW KNOX CO, PITTSBURGH, PA
Screed attachment does work of spreading machine,*. NP p195 ..... Mar 24
BROS INC, MINNEAPOLIS, MINN
Sheepsfoot roller needs no turn-arounds,*. NP p140 Jun 23
BROWN MFG CO, WOODBINE, IOWA
Trencher digs wider ditches,*. NP p61 ..... May 26
BROWNING MFG CO, SAN ANTONIO, TEX
Line of tandem rollers. NP p195 ..... Mar 24
BRUNING (CHARLES) CO INC, MOUNT PROSPECT, ILL
A line of surveying instruments added. NP p61 ..... Jan 14
BUCK EQUIPMENT CORP, CINCINNATI, OHIO
Safety hoist goes up fast. NP p57 ..... Jun 9
BUCYRUS – ERIE CO, SOUTH MILWAUKEE, WIS
Three piece high lift boom fits hydraulic excavator. NP p90 ..... May 19
Crawler crane excavator can hoist to 9 tons. NP p56 Jun 2
CALWELD INC, LOS ANGELES, CAL
Bucket type earth drill has crawler tracks. NP p60 Jan 21
CASE (J. I.) CO, RACINE, WIS
More push in wheel loader,*. NP p49 ..... Mar 3
CATERPILLAR TRACTOR CO, PEORIA, ILL
Improved tractor Cat D6 is ready,*. NP p53 ..... Feb 4
Improved D4 tractor,*. NP p49 ..... Mar 10
Three aids to faster pushloading,**. NP p56 ..... Apr 28
Line of wheeled loaders announced,*. NP p63 ..... May 5
Increased capacity for pipelayer. NP p62 ..... May 26
Improved graders range from 85 to 115 hp,*. NP p56 Jun 2
CHAIN BELT CO, MILWAUKEE, WIS
Punch card automation for concrete plants. NP p106 May 19
CHEVROLET TRUCK DIVISION, DETROIT, MICH
Truck suspension improved,*. NP p61 ..... Apr 7
CLARK EQUIPMENT CO, BENTON HARBOR, MICH
Tractor shovel can turn in less than its length. NP p104 ..... May 19
Fork lift truck casts beam, carries it to stockpile area,*. NP p51 ..... Jun 16
Hydraulic backhoe attached without tools,*. NP p142 Jun 23
CLEAVER BROOKS SPECIAL PRODUCTS, WAUKESHA, WIS
Portable asphalt heater for plant mixture use. NP p51 ..... Jun 16
CLEVELAND TRENCHER CO, CLEVELAND, OHIO
Trencher wheel shifts laterally,*. NP p61 ..... May 26
CLIPPER MFG CO, KANSAS CITY, MO
Concrete core drill uses induction type motor. NP p45 ..... Jun 30
CLUPAK INC, NEW YORK, N.Y.
Stronger paper improves packing. NP p92 ..... May 19
COLORADO FUEL & IRON CORP, PALMER, MASS
Lift sling made of rubber grommets, aircraft cables. NP p53 ..... Mar 31
COMPUTER MEASUREMENTS CO, SYLMAR, CAL
Transistorized pipe detector,*. NP p69 ..... May 12
CONCRETE CONTROLS CORPORATION, WHEATON, ILL
Batcher control checks aggregate moisture. NP p60 Jan 21
CONSTRUCTION MACHINERY CO, WATERLOO, IOWA
Mixer features flared drum,*. NP p173 ..... Mar 24
CRANE CO, CHICAGO, ILL
Steel gate valves have flexible wedge disk. NP p45 Jun 30
CROUSE-HINDS CO, SYRACUSE, N.Y.
Runway marker lights tilt if hit. NP p98 ..... May 19
Flush lights mark airport runways. NP p62 ..... May 26
DANIEL, MANN, JOHNSON AND MENDENHALL, LOS ANGELES, CAL
Partnership started 14 yrs ago becomes big architect-engineer organization,**. p53 ..... Feb 11
DAVIS ENGINEERING INC, DOWAGIAC, MICH
Versatile hydraulic excavator,*. NP p40 ..... Jan 7
DAVIS MFG INC, WICHITA, KAN
Tiny trencher backfiller has crawler type tracks. NP p104 ..... May 19
DEER (JOHN) & CO, MOLINE, ILL
Single stick control for crawler tractors. NP p88 .. Feb 18
DIAMOND IRON WORKS, CHICAGO, ILL
Portable crushing plant features high output. NP p51 Jun 16
DIAMOND T MOTOR TRUCK CO, CHICAGO, ILL
Big trucks revamped,*. NP p56 ..... Apr 7
DODGE TRUCK DIVISION, DETROIT, MICH
Design stresses function,*. NP p62 ..... Apr 7
DOUGLAS MOTOR CORP, MILWAUKEE, WIS
Nine wheel self propelled roller,*. NP p55 ..... Mar 17
EIMCO CORP, SALT LAKE CITY, UTAH
Crawler mounted loader has 2¼ cu yd bucket. NP p89 May 19
ENGINEERING EQUIPMENT INC, WATERLOO, IOWA
Wheel in concrete saw means straight lines. NP p50 Mar 3
ERIE TOOL WORKS, ERIE, PA
Manual device cold-draws tees in copper tubing,*. NP p54 ..... Feb 4
FERGUSON (H.K.) CO, CLEVELAND, OHIO
Company makes safety work; award for excellent record,*. p81 ..... Jun 2
FIRESTONE TIRE & RUBBER CO, AKRON, OHIO
Improved tire made for utility tractors. NP p102 ..... May 19
To spend $120m for plants. p97 ..... May 26
FLUID REGULATORS INC, PAINESVILLE, OHIO
Valves have visual check,*. NP p55 ..... Jun 2
FORD MOTOR CO, BIRMINGHAM, MICH
Loader can be mounted on Ford's tractor line. NP p83 ..... Feb 18
FRUIN-COLNON CONTRACTING CO, ST. LOUIS, MO
Annual management meeting,*. p146 ..... Feb 18
FULLERFORM CONTINUOUS PIPE CORP, PHOENIX, ARIZ
Casting concrete pipe in place,*. NP p83 ..... Feb 18
FWD CORP, CLINTONVILLE, WIS
Wheel tractor carries sideboom. NP p139 ..... Jun 23
GATES & SONS INC, DENVER, COLO
Cam-Lock forming system saves bracing. NP p53 .. Feb 4
GENERAL MOTORS, PONTIAC, MICH
V-6 and V-12 trucks,*. NP p56 ..... Apr 7
GEOPHYSICAL SPECIALTIES, HOPKINS, MINN
Baby seismograph saves drilling,*. NP p89 ..... May 19
GETMAN BROS, SOUTH HAVEN, MICH
Scoot-Crete placing trucks,*. NP p90 ..... May 19
GOOD ROADS MACHINERY CORP, MINERVA, OHIO
All purpose tail-gate spreader,*. NP p76 ..... Apr 21
GREENVILLE STEEL CAR CO, GREENVILLE, PA
Hydraulic ripper will rip 48 inches,*. NP p70 ..... May 12
GREGORY INDUSTRIES INC, LORAIN, OHIO
Stud-welded anchors fit angle fillets,*. NP p54 ... Jun 16
GROSSMAN ENGINEERING & COMPONENTS DIV, QUINCY, MASS
Colonial style pre-fab field offices,*. NP p139 ... Jun 23
GUIBERT STEEL CO, PITTSBURGH, PA
Magnet positions portable drill,*. NP p62 ..... May 26
GULTON INDUSTRIES, METUCHEN, N.J.
Wave deflection meters water,*. NP p89 ..... May 19
HAUSERMAN CO, CLEVELAND, OHIO
Movable partitions give design flexibility. NP p48 Feb 11
HERCULES MOTORS CORP, CANTON, OHIO
Diesel engines for light and medium trucks. NP p59 Jan 21
HIGHWAY EQUIPMENT CO, CEDAR RAPIDS, IOWA
Self-propelled machine spreads chips on roads. NP p92 ..... May 19
Material spreader for soil stabilization. NP p104 .. May 19
HIGHWAY MANAGEMENT ASSOCIATES, MADISON, WIS
Ex-hwy commissioners Plummer and Haas form consulting firm,*. p57 ..... Feb 4
HOLWAY ENGINEERS INC, TULSA, OKLA
Two Tulsa engineering firms merge. p56 ..... Feb 11
HOUGH, (FRANK G.) CO, LIBERTYVILLE, ILL
Tractor-shovel has 1-yd bucket,*. NP p53 ..... Mar 31
HUBER-WARCO CO, MARION, OHIO
Motor graders redesigned,*. NP p81 ..... Apr 21
HYDROCARBON RESEARCH INC, NEW YORK, N.Y.
Answers $10m damage suit by Formosa on fertilizer plant. p87 ..... Feb 11
HYSTER CO, PEORIA, ILL
Compactor works at high speed,*. NP p82 ..... Apr 14
Power controlled winch for Cat tractors. NP p92 .... Apr 14
INGERSOLL-RAND CO, NEW YORK, N.Y.
Air hoists operate without multiple reeving. NP p51 Jun 16
INTERNATIONAL HARVESTER CO, CHICAGO, ILL
Off-highwat trucks,*. NP p62 ..... Apr 7
Twin engine dozer packs 750 hp,*. NP p98 ..... May 19
JEBCO INC, BLAIR, NEB
Belt loader for motor grader,*. NP p47 ..... Feb 11
JOHNS-MANVILLE CORP, NEW YORK, N.Y.
Ceiling will heat, cool, absorb sound. NP p172 .... Mar 24
JOHNSON GEAR & MFG CO, BERKELEY, CAL
Drive permits engine testing for vertical pump,*. p69 ..... Feb 25
JOHNSON & JOHNSON CO, NEW BRUNSWICK, N.J.
Adhesive replaces screw for installing juncture box,*. NP p154 ..... Jun 23
JOY MANUFACTURING CO, PITTSBURGH, PA
Rotary compressor mounts on any tractor. NP p56 .. Apr 28
KOEHRING CO, MILWAUKEE, WIS
Sprawler crane lifts and carries 24 tons,*. NP p48 .. Feb 11
KOLMAN MFG CO, SIOUX FALLS, S.D.
Pneumatic tired radial stacker is cable supported,*. NP p84 ..... Feb 18
LAMSON & SESSIONS CO, CLEVELAND, OHIO
High strength bearing bolt eliminates one washer. NP p83 ..... Feb 18
LARAMY PRODUCTS CO, COHASSET, MASS
Plastic welder features new heating element. NP p92 Apr 14
LeTOURNEAU (R. G.) INC, LONGVIEW, TEXAS
Fork lift carries 17 tons,*. NP p47 ..... Feb 11
LeTOURNEAU-WESTINGHOUSE CO, PEORIA, ILL
Tandem scrapers,*. NP p56 ..... Jan 14
Graders have Preco blade control,*. NP p63 ..... May 5
Tournapull has new engine, more power. NP p146 .. Jun 23
LEUKART MACHINE CO INC, COLUMBUS, OHIO
Jay tampers have increased tamping force. NP p81 .. Apr 21

LIDSEEN INC, HAYESVILLE, N. C.
Improved conduit pipe bender,*. NP p97 ..... May 19

LINDE CO see: UNION CARBIDE CORP

LINK-BELT CO, CHICAGO, ILL
German-made huge excavator available in U.S.,*. NP p69 ..... May 12
Sludge collector line expanded,*. NP p70 ..... May 12

LOCKWOOD, KESSLER & BARTLETT, SYOSSET, N.Y.
Supervisory service hits net profit. p141 ..... Apr 14
and correction p14 ..... Apr 21

LONGYEAR (E.J.) CO, MINNEAPOLIS, MINN
Versatile diamond drill bores hole at any angle,*. NP p91 ..... Apr 14

MACK TRUCKS INC, PLAINFIELD, N. J.
Two mixers move in,*. NP p173 ..... Mar 24
Six-wheel Diesel trucks designed for hard service. NP p60 ..... Jun 2

MADDEN CORP, CHICAGO, ILL
Rugged metering pump is moderately priced. NP p53 ..... Jun 16

MAGINNISS POWER TOOL CO, MANSFIELD, OHIO
Vibrating screed adjusts to slab mix. NP p97 ..... May 19

MALLOG (P.H.) CO, NILES, OHIO
Steel sulky seat: welcome throne for welders,*. NP p81 ..... Apr 14

MANITOWOC ENGINEERING CORP, MANITOWOC, WIS
Integrated controls for dragline. NP p53 ..... Mar 31

MARTIN CO, KEWANEE, ILL
Shovel loader for motor graders,*. NP p59 ..... Jan 21
Scraper bowl mounts on grader,*. NP p83 ..... Feb 18
Graderoller now self-lifting,*. NP p76 ..... Apr 21

McGRAW (F. H.), HARTFORD, CONN
Difficulty in raising money to act as redeveloper. p86 ..... Feb 11

MERRITT-CHAPMAN & SCOTT CORP, NEW YORK, N.Y.
Construction does not pay, stockholders find out at annual meeting. CW p17 ..... Apr 28
Corporation looks at "profitless" construction; personnel changes,**. p22 ..... May 5
Gorge High dam: no penalties although completion date past,*. p28 ..... May 19

MIDLAND PRODUCTS CO, MAHWAH, N.J.
Diaphragm slurry pump of aluminum alloy,*. NP p152 ..... Jun 23

MINNEAPOLIS-MOLINE CO, HOPKINS, MINN
Motrac tractor and loader,*. NP p73 ..... Apr 21

MOBILE DRILLING INC, INDIANAPOLIS, IND
Hydraulic coring machine for concrete pavements. NP p60 ..... Jan 21

MODJESKI & MASTERS, HARRISBURG, PA
New partners admitted to firm. p163 ..... Jun 23

MORAN, PROCTOR, MUESER & RUTLEDGE
Foundations are more art than science, partners agree on 50th birthday,**. p110 ..... May 19

MORRISON-KNUDSEN
Top posts filled, A. Strandberg and J. Armitage move up,*. p93 ..... Feb 18

MOTOR PRODUCTS CORP, BROKEN ARROW, OKLA
High efficiency claimed for hydraulic winch. NP p60 ..... Jun 2

MUELLER CO, DECATUR, ILL
Plug valve turns easily, is maintenance free,*. NP p52 ..... Jun 16

NELSON IRON WORKS, CLIFTON, N.J.
Underslung arms on front-end loader. NP p84 ..... Apr 21

NELSON STUD WELDING DIVISION see: GREGORY INDUSTRIES

NEW ENGLAND CARBIDE TOOL CO, MEDFORD, MASS
Portable concrete drilling unit,*. NP p84 ..... Feb 18

PARSONS, BRINCKERHOFF et al. NEW YORK, N.Y.
Partners names added. p63 ..... Jan 14

PEALE & CO, OMAHA, NEB
Long boom jacknives to 8 ft when on the road,*. NP p201 ..... Mar 24

PERFECTION INDUSTRIES, CLEVELAND, OHIO
Infra red heat for large areas given by gas fired heaters. NP p49 ..... Mar 3

PERINI CORP
Promotions into executive positions. p45 ..... Jan 7

PETTIBONE MULLIKEN CORP, CHICAGO, ILL
Speedail adds tractor shovel,* NP p86 ..... Feb 18

PITTSBURGH STEEL CO, PITTSBURGH, PA
Hinged road fabric,*. NP p45 ..... Jun 30

QUICK-WAY TRUCK SHOVEL CO, DENVER, COLO.
Truck cranes now in three size groups. NP p152 ..... Jun 23

RAYMOND INTERNATIONAL INC.
H. C. Boschen becomes president, G. F. Ferris chairman of the board,*. p72 ..... May 26
New president and new stock exchange listing,*. p44 ..... Jun 16

SCHRAMM INC, WEST CHESTER, PA.
Self contained drilling rig,*. NP p199 ..... Mar 24

SHLAGRO STEEL PRODUCTS CORP, SOMERVILLE, MASS
Rail-mounted tower crane rotates full circle,*. NP p148 ..... Jun 23

SHOVEL SUPPLY CO, DALLAS, TEX
Tamping roller travels either way equally well,*. NP p81 ..... Apr 21

SLOCUM AND ROBERTS, LAKEWOOD, OHIO
New consulting firm formed. p65 ..... May 5

SMITH & LOVELESS, KANSAS CITY, MO
Two ejectors added to sewage equipment line. NP p84 ..... Apr 21

SOILTEST INC, CHICAGO, ILL
Nuclear gage measure soil moisture and density,*. NP p72 ..... May 12

SS-13 SALES CO, PHOENIX, ARIZ
Chemicals stop water seepage. NP p49 ..... Mar 10

STANDARD DRY WALL PRODUCTS, NEW EAGLE, PA
Thorospan sealant bonds many materials, textures. NP p49 ..... Mar 10

STANDARD STEEL CORP, LOS ANGELES, CAL
Asphalt plant has 2 ton capacity,*. NP p55 ..... Jun 2

STEFFAN MFG CORP, SALEM, OHIO
Mechanized hand cutter for pipe,*. NP p90 ..... May 19

STELLER, MILLAR & LESTER INC, LOS ANGELES, CALIF
Twin engine street sweeper features independent drive. NP p61 ..... Jan 14

STONE & WEBSTER ENGINEERING CORP, BOSTON, MASS
New chairman and president named. p65 ..... Jan 21

STOW MFG CO, BINGHAMTON, N.Y.
Vibrating screed can be set to walk along slab. NP p91 ..... Apr 14
Engine stroke teams with tampers vibrator stroke,*. NP p82 ..... Apr 21

STUDEBAKER-PACKARD CORP, SOUTH BEND, IND
Champ pick-up truck gives visibility,*. NP p61 ..... Apr 7

SUMO PUMPS, STAMFORD, CONN
New underwater pump. NP p148 ..... Jun 23

SUPERIOR CONCRETE ACCESSORIES, FRANKLIN PARK, ILL
Form tie snaps on with no nails,*. NP p59 ..... Jan 21

SURY PRODUCTS CO, CLEVELAND, OHIO
Pipe-marking too cuts costs, saves time. NP p154 ..... Jun 23

TELLUROMETER INC, WASHINGTON, D. C.
Micro distancer and other instruments now have dual functions,*. NP p174 ..... Mar 24

THERN MACHINE CO, WINONA, MINN
Pull one pin -- crane folds away. NP p82 ..... Apr 14

THIOKOL CHEMICAL CORP, TRENTON, N.J.
Tough plastic buttons mark traffic lanes. NP p90 ..... May 19

TRAINER ASSOCIATES INC, NEW CASTLE, DEL
PoleBore auger works in wide range of soils,*. NP p50 ..... Mar 3

TRETOL INC, CHICAGO, ILL
Curing compound also hardens and seals. NP p61 ..... Jan 14

ULMAC EQUIPMENT CO, EL PASO, ILL
Two ditching attachments for motor graders. NP p172 ..... Mar 24

ULRICH MFG CO, ROANOKE, ILL
Elevating attachment goes on Cat grader. NP p57 ..... Jun 9

UNION ASBESTOS & RUBBER CO, CHICAGO, ILL
Synthetic foam type pipe insulation for extreme temperatures. NP p97 ..... May 19

UNION CARBIDE CORP, NEW YORK, N.Y.
Gas cutting torch slices metal,*. NP p57 ..... Jun 9

UNIT CRANE H SHOVEL CORP, MILWAUKEE, WIS
More features packed into 15-ton crane. NP p55 ..... Mar 17

UNIVERSAL BUILDERS SUPPLY CO, NEW YORK, N.Y.
Plastic bar supports eliminate rust spots. NP p82 ..... Apr 14

U. S. STEEL CORP
I.S. Olds and H. E. Smith retire as directors,*. p205 ..... Mar 24

VIBRO-PLUS PRODUCTS INC, STANHOPE, N.J.
Sheepsfoot roller also vibrates,*. NP p45 ..... Jun 30

WARNER & SWASEY CO, LANSING, MICH
Road maintenance trucks mount snow equipment. NP p82 ..... Apr 21

WASHINGTON STEEL CORP, WASHINGTON, PA
Color for steel will not fade, chalk or peel. NP p57 ..... Jun 9

WAYNE MANUFACTURING CO, POMONA, CAL
Three-wheeled street sweeper,*. NP p142 ..... Jun 23

WEIL PUMP CO, FREMONT AVE, CHICAGO, ILL
Pumps designed for water supply systems. NP p49 ..... Mar 10

WEST AMERICAN RUBBER CO, LOS ANGELES, CAL
Pipe wrapping tape combines butyl and vinyl. NP p50 ..... Mar 10

WHITE MOTOR CO, CLEVELAND, OHIO
Belt drive truck PTO has simplified design. NP p56 ..... Apr 28

WILLARD CONCRETE MACHINERY CO, LYNWOOD, CAL
Concrete mixer unloads in front,*. NP p172 ..... Mar 24

WILLIAMS FORM ENGINEERING CORP, GRAND RAPIDS, MICH
Telescopic screw jacks designed for falsework. NP p55 ..... Mar 17

WILLYS MOTORS INC, TOLEDO, OHIO
Versatile jeep can take different attachments,*. NP p92 ..... May 19

WILSEY & HAM, SAN FRANCISCO, CAL
Top personnel promotions; firm becomes Wilsey, Ham & Blair,*. p70 ..... Feb 25

WINCHARGER CORP, SIOUX CITY, IOWA
Generator for concrete vibrators. NP p172 ..... Mar 24

WORTHINGTON CORP, HARRISON, N. J.
Swept back style truck mixers,*. NP p172 ..... Mar 24
Paving breaker can drive spikes and sheeting, NP p174 ..... Mar 24
"Blue Brute" compressor stacks cylinder stages. NP p84 ..... Apr 21

YOUNG SPRING & WIRE CORP, OTTAWA, KAN
Prime mover offers versatility,*. NP p199 ..... Mar 24

How to Use this Index

Every article appearing in *ENGINEERING NEWS-RECORD* is indexed with the exception of Briefs (such as "Labor Briefs", "Around the World", "Careers") and of Obituaries.

All articles are indexed **alphabetically** by subject. Under each heading entries are listed **chronologically** as they appeared.

Many important headings are divided into sub-headings e. g.: BRIDGES – geographically by states or countries; CITIES – by name; BUILDINGS – by type (Churches, Garages, etc.); LABOR – by subject (Contracts, Strikes, etc).

The latter part of this index contains AUTHORS, PERSONALITIES; COMPANIES. Here are listed the names of people who are the subject of articles, as well as names of authors of by-lined articles and published letters. Under the COMPANIES heading, equipment manufacturers' names will be found, also firms about which articles were written. Individuals or firms mentioned in feature articles dealing with various construction projects are seldom indexed by their names.

Items which describe new types of equipment are indexed twice: under the manufacturer's name in the COMPANIES section, and under the proper subject, e. g.: PLASTICS, or EQUIPMENT, • Drills.

Entries concerning only particular projects or firms are not repeated under the general heading. For example, an article about the Smith Construction Co. appears only in the COMPANIES section of the Index and will not be found under the heading: CONTRACTORS. A news item about bonds issued for Berkshire Thruway will be listed in the New York section of HIGHWAYS and will not be found under: CONSTRUCTION, •Financing, when general stories on bonds are listed.

See means that all entries on the subject will be found under another heading, thus:

EROSION see: SOIL MECHANICS

See also means that a related heading should also be checked, thus:

SEWAGE see also: WATER POLLUTION

The following abbreviations and signs are used:

RC — Reader Comment
CW — Construction Week
WO — Washington Observer
NP — New Product
e — Editorial
** — Article with many illustrations
* — Illustrated article (if asterisk precedes entry, reference is to a picture with caption only)

If you would like any information about material which EN-R has published, do not hesitate to make direct inquiry by mail or telephone to: Mrs. Eva Gierat, 28th floor, 330 West 42nd Street, New York 36, N. Y.; telephone LOngacre 4-3000 extension 2259.

ENGINEERING NEWS-RECORD

Published by ENGINEERING NEWS-RECORD
Copyright McGraw-Hill Publ. Co., 1960

INDEX
OL
1
6
4
60
MI